

# RHODES HOMES ARIZONA L.L.C.

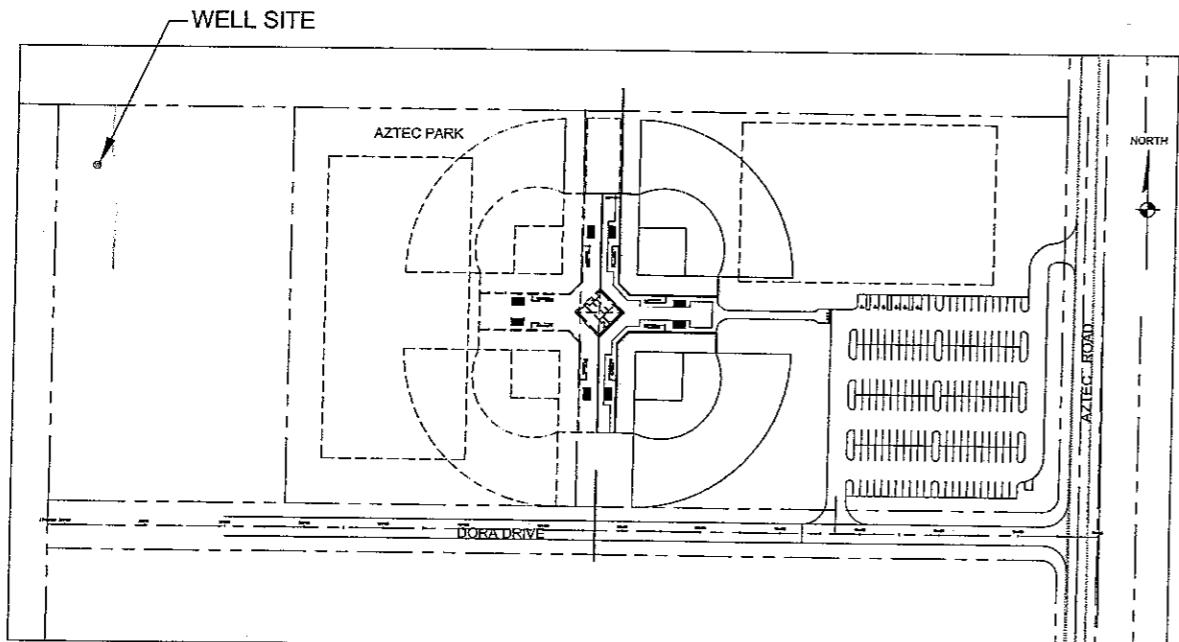
## GOLDEN VALLEY RANCH WELL #1

### MOHAVE COUNTY, ARIZONA

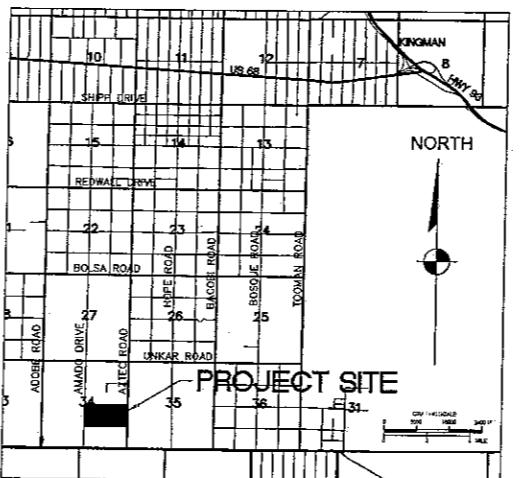
FEBRUARY 2006

**PRELIMINARY**  
NOT FOR CONSTRUCTION

 REGISTERED PROFESSIONAL ENGINEER CERTIFICATE OF D. KIM SORENSEN PE, AZ U.S.A. DATE	
DRAWN BY	APPROVED
REVISION	REVISION
SCALE	SCALE
DATE	DATE
 STANLEY CONSULTANTS INC. 5820 S. EASTERN AVENUE SUITE 200 LAS VEGAS, NEVADA 89119 (702) 369-9393 <a href="http://www.stanleygroup.com">www.stanleygroup.com</a>	
AS NOTED	AS NOTED
(V) NA	(V) NA
DRAWN BY AB	DRAWN BY AB
CHECKED BY DKS	CHECKED BY DKS
DATE 02-01-2006	DATE
5820 S. Eastern Avenue, Suite 200 Las Vegas, Nevada 89119 (702) 369-9393 <a href="http://www.stanleygroup.com">www.stanleygroup.com</a>	



PROJECT LOCATION MAP  
Scale: NTS



VICINITY MAP  
Scale: NTS

<u>DRAWING No.</u>	<u> SHEET No.</u>	<u>DESCRIPTION</u>
G1	1	TITLE SHEET & SHEET INDEX
C1	2	SITE PLAN & DISCHARGE PLAN
WP1	3	PUMP & DISCHARGE DETAILS
WP2	4	DETAILS
WP3	5	DETAILS
PP1	6	PUMP TO WASTE PLAN AND PROFILE
E001-E012	7-18	ELECTRICAL
I001-I002	19-20	INSTRUMENTATION

APPROVAL

ADEQ	DATE
MOHAVE COUNTY	DATE
RHODES HOMES	DATE

**DEVELOPER**  
RHODES HOMES ARIZONA LLC  
2215 HUALAPAI MTN RD.  
SUITE H  
KINGMAN, ARIZONA 86401  
(928) 718-2210

**ENGINEER / SURVEYOR**  
STANLEY CONSULTANTS, INC.  
5820 S. EASTERN AVENUE  
SUITE 200  
LAS VEGAS, NEVADA 89119  
(702) 369-9393

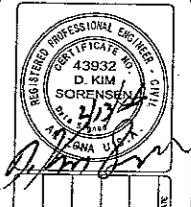
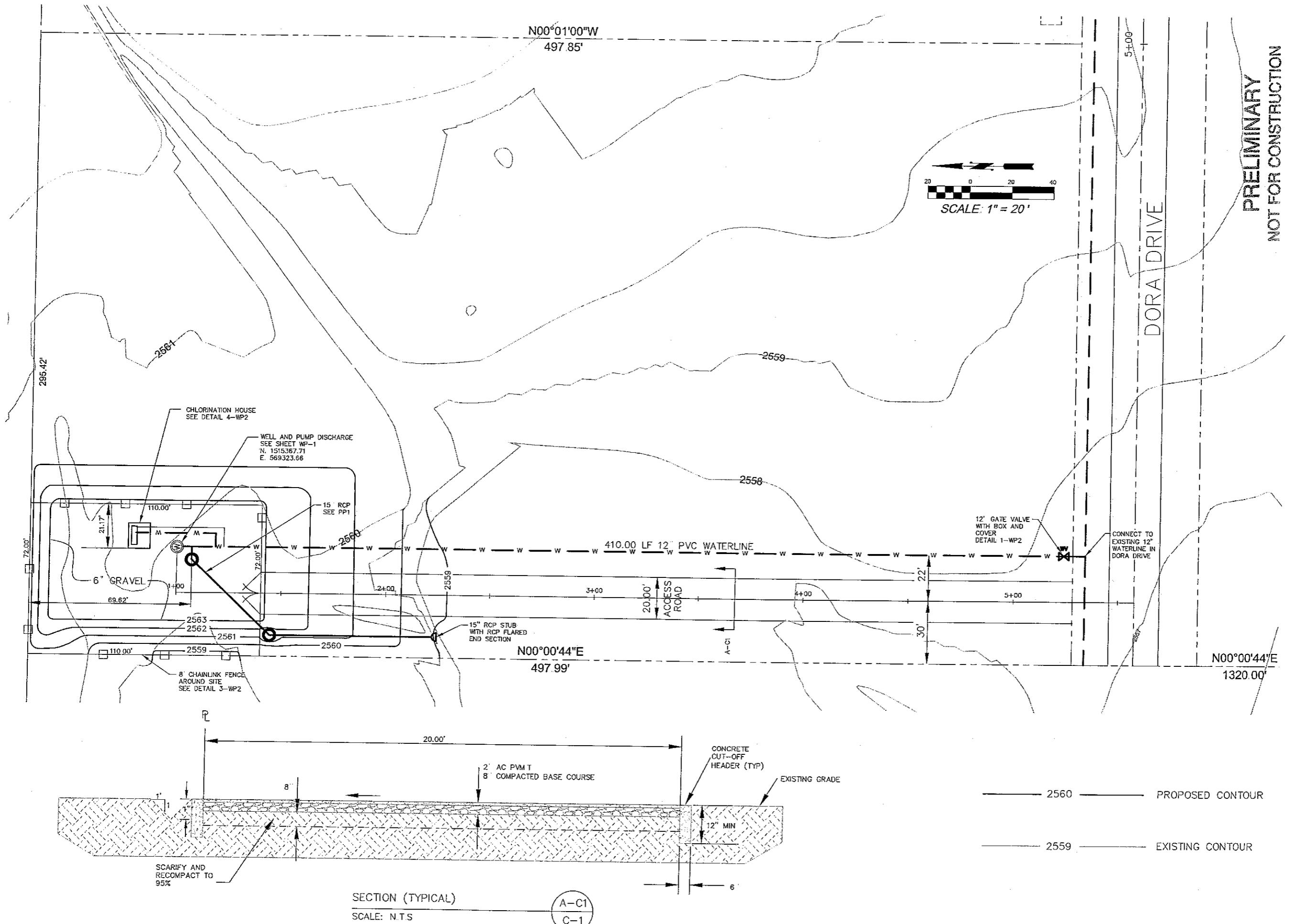
**BASIS OF BEARINGS**  
NORTH 00°12'47" EAST — THE EAST LINE OF THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 27, TOWNSHIP 21 NORTH, RANGE 18 WEST, GILA & SALT RIVER MERIDIAN, MOHAVE COUNTY, ARIZONA, AS DETERMINED BY THE ARIZONA COORDINATE SYSTEM OF 1983 (AZ83-WIF), WEST ZONE, INTERNATIONAL FOOT, UTILIZING FAST STATIC OBSERVATIONS PROCESSED BY NGS-OPUS. M.C.S.D. "SD 35" = LATITUDE 35°09'22.43032"N LONGITUDE 114°10'58.56309"W (NAD 83) HEIGHT 2466.56824ft (NAVD'88)

**BENCHMARK**

BENCHMARK # "AZT 5" M.C.S.D.  
ELEVATION = 2659.468ft (NGVD 29)  
CONVERSION = 2662.014ft (NAVD 88) - 2.546 = 2659.468ft (NGVD 29)  
DESCRIPTION: 1 1/2" ALUMINUM CAP IN CONCRETE STAMP MOHAVE COUNTY 1999 "RLS 10343" LOCATED AT THE SOUTHWEST CORNER OF AZTEC ROAD & BOLSA DRIVE

RHODES HOMES ARIZONA, LLC  
GOLDEN VALLEY RANCH WELL #1  
COVER SHEET  
MOHAVE COUNTY

**SHEET**  
**G1**  
1 OF 20 SHEETS  
SCI PROJECT#  
18499.07.03



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**GOLDEN VALLEY RANCH WELL #1  
SITE PLAN**

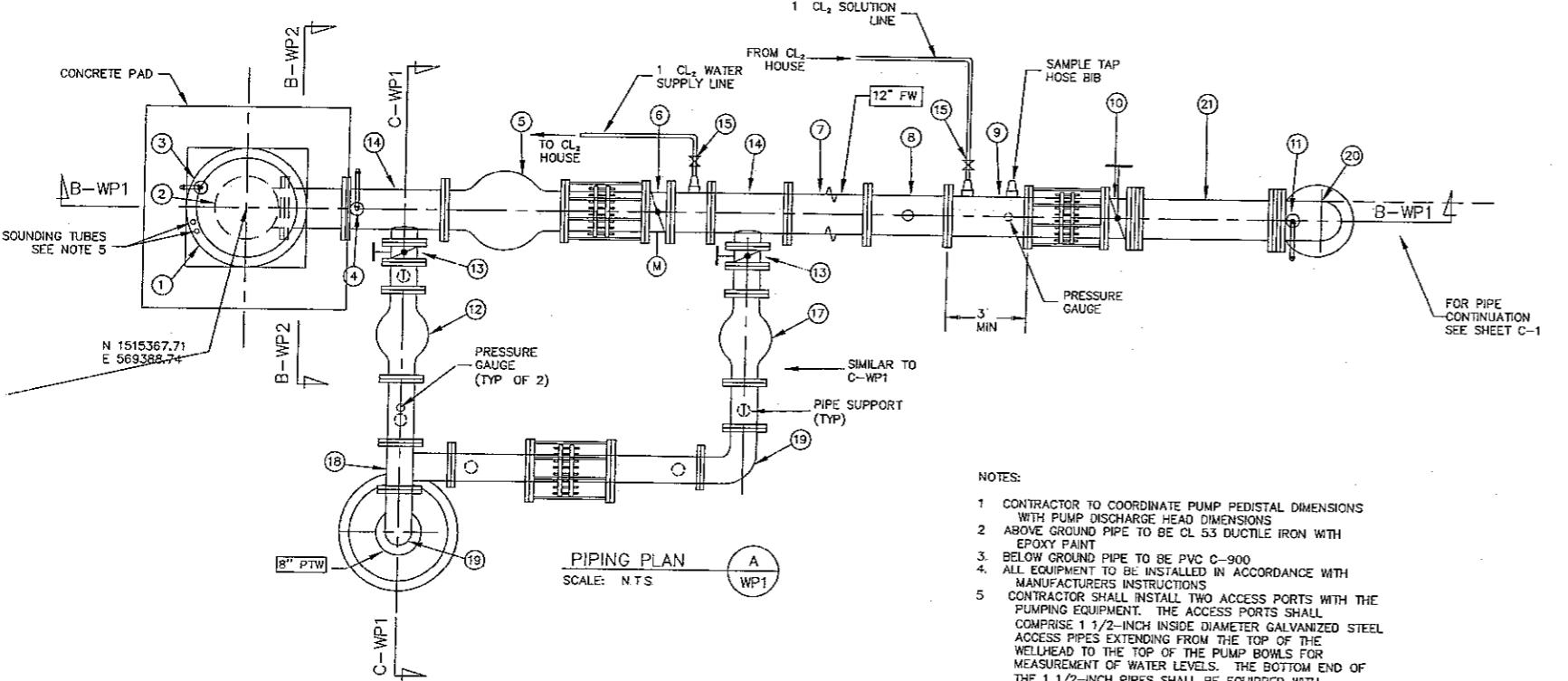
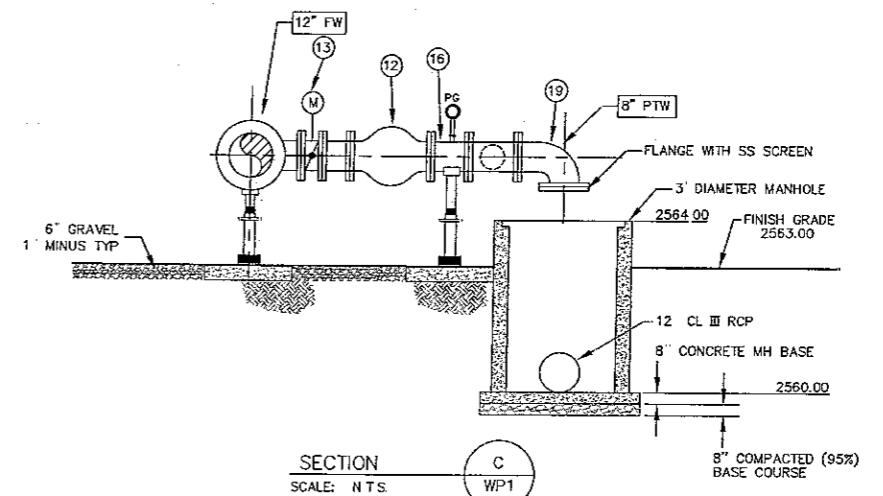
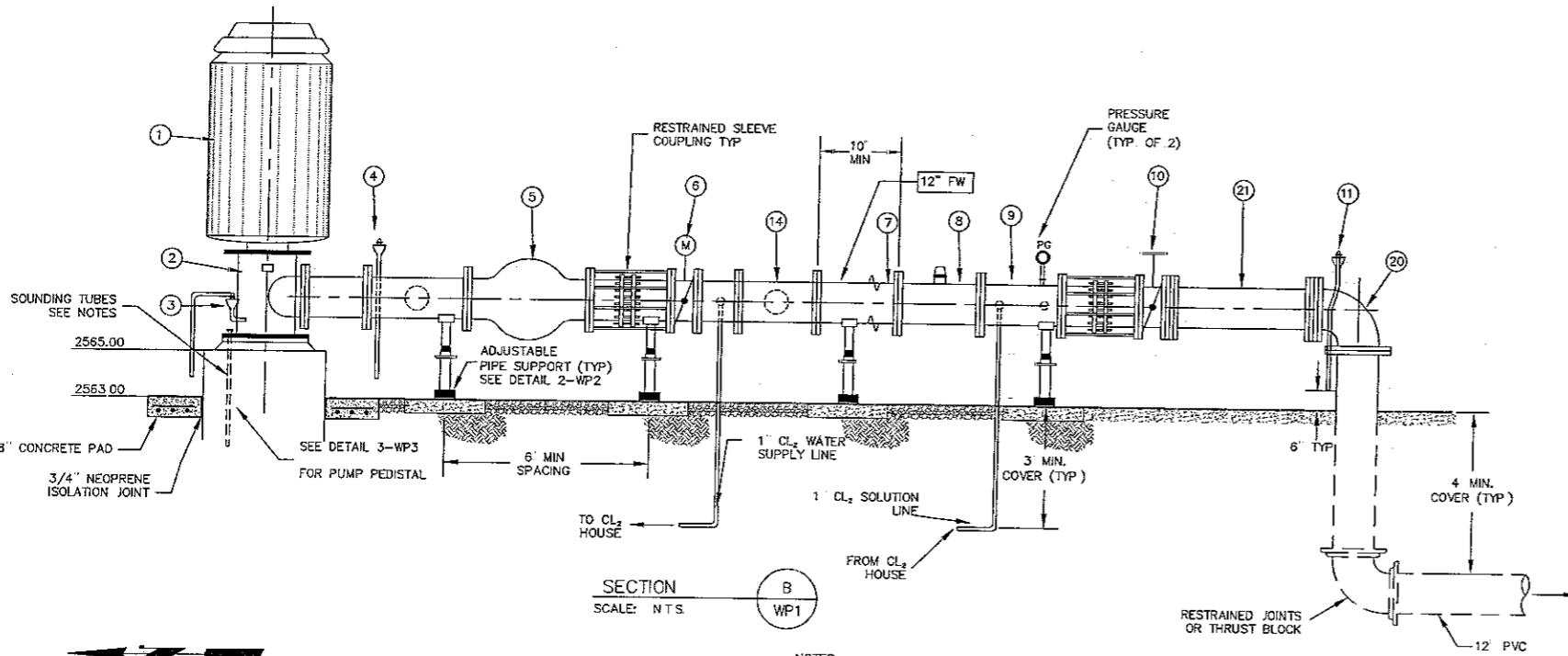
RHC

GOL  
MOHAWE COUNTY

SHEET  
**C1**  
2 OF 20 SHEETS  
SCI PROJECT#  
18499.07.03



**PRELIMINARY  
NOT FOR CONSTRUCTION**



NOTES:

1. CONTRACTOR TO COORDINATE PUMP PEDESTAL DIMENSIONS WITH PUMP DISCHARGE HEAD DIMENSIONS
2. ABOVE GROUND PIPE TO BE CL 53 DUCTILE IRON WITH EPOXY PAINT
3. BELOW GROUND PIPE TO BE PVC C-900
4. ALL EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS
5. CONTRACTOR SHALL INSTALL TWO ACCESS PORTS WITH THE PUMPING EQUIPMENT. THE ACCESS PORTS SHALL COMprise 1 1/2-INCH INSIDE DIAMETER GALVANIZED STEEL ACCESS PIPES EXTENDING FROM THE TOP OF THE WELLHEAD TO THE TOP OF THE PUMP BOWLS FOR MEASUREMENT OF WATER LEVELS. THE BOTTOM END OF THE 1 1/2-INCH PIPES SHALL BE EQUIPPED WITH THREADED CAPS AND THE BOTTOM 20 FEET OF THE PIPE STRING SHALL BE PERFORATED WITH A MINIMUM OF TEN (10) 1/4-INCH DIAMETER HOLES PER FOOT. THE HOLES SHALL BE EVENLY SPACED. THE SOUNDER ACCESS PIPES SHALL PERMIT THE FREE AND UNOBSTRUCTED PASSAGE OF THE OWNER'S ELECTRIC SOUNDER AND PRESSURE TRANSDUCER FROM THE BOTTOM OF THE ACCESS PIPES SUCH THAT ACCURATE WATER LEVEL MEASUREMENTS CAN BE OBTAINED. THE ACCESS PORT AND PIPE DESIGN SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION OF THE PIPE AND FITTINGS.

**VALVE AND EQUIPMENT SCHEDULE**

NO.	DESCRIPTION	SIZE	JOINT TYPE	REMARKS
1	ELECTRIC MOTOR	600 HP	---	N.I.C. BY PUMP EQUIPMENT SUPPLIER
2	DISCHARGE HEAD	12" DISCHARGE	---	N.I.C. BY PUMP EQUIPMENT SUPPLIER
3	AIR/VAC VALVE ASSEMBLY	1"	---	APCO SERIES 140
4	COMB AIR VAC/AIR RELEASE DEEP WELL AIR VENT	2"	---	APCO 144 DAT
5	SILENT CHECK VALVE	12"	FL X FL	OCV SERIES 94-3
6	BUTTERFLY VALVE	12"	FL X FL	ELECTRIC MOTOR ACTUATOR
7	SPool PIECE	12"	FL x FL	MINIMUM LENGTH OF 5 PIPE DIAMETERS
8	MAGNETIC FLOWMETER	12"	FL X FL	SIEMENS MAG 5100W
9	SPool PIECE W/OUTLET	12"	FL x FL	MINIMUM LENGTH OF 3 PIPE DIAMETERS
10	AWWA BUTTERFLY VALVE	12"	FL X FL	HAND WHEEL OPERATOR
11	COMB AIR VAC/AIR RELEASE VALVE ASSEMBLY	1"	---	APCO 143C
12	AUTOMATIC CONTROL VALVE	8"	FL X FL	OCV SERIES 128
13	BUTTERFLY VALVE	8"	FL X FL	HAND WHEEL OPERATOR
14	TEE	12" x 12" x 8"	FL x FL x FL	
15	BALL VALVE	1	THREADED	
16	SPool PIECE WITH TAP	8	FL X FL	
17	SURGE ANTICIPATION VALVE	12	FL X FL	OGV SERIES 108SA-3
18	TEE	8" x 8" x 8"	FL X FL	
19	90° BEND	8	FL X FL	
20	90° BEND	12"	FL X FL	
21	STATIC MIXER	12"	FL X FL	KOFLO SERIES 512 2 ELEMENT

FL = FLANGE

**Stanley Consultants Inc.**

RHODES HOMES ARIZONA, LLC  
GOLDEN VALLEY RANCH WELL #1  
PUMP AND DISCHARGE DETAILS  
MOHAVE COUNTY, ARIZONA

Sheet  
**WP1**  
3 OF 20 SHEETS  
SCI PROJECT#  
18499.07.03

**PRELIMINARY  
NOT FOR CONSTRUCTION**

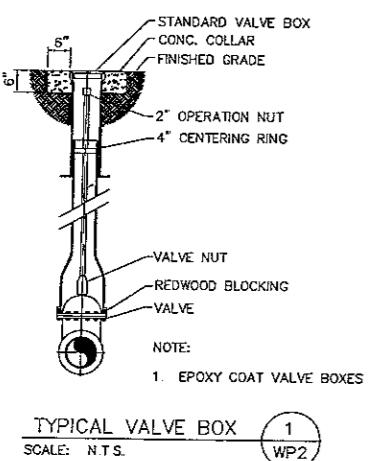


SCALE (H) 1" = 20'	SCALE (V) NA	DRAWN BY B. Curtis	CHECKED BY	DATE 02-01-2006
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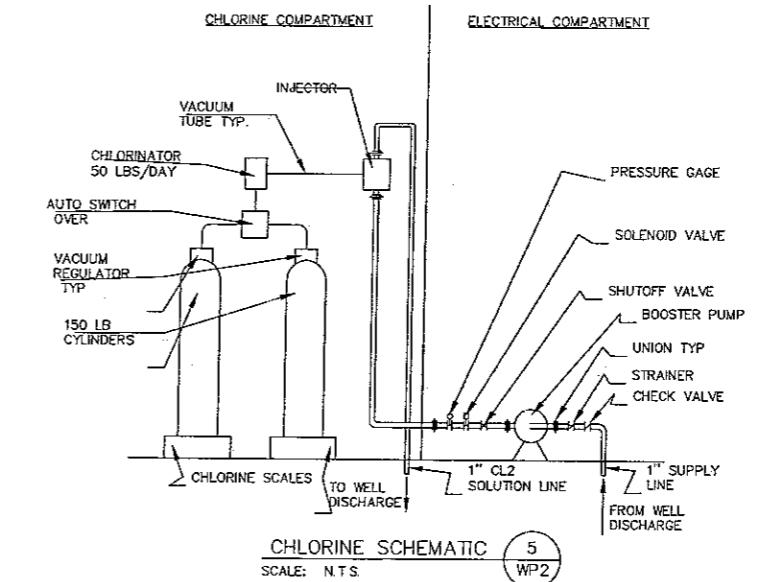
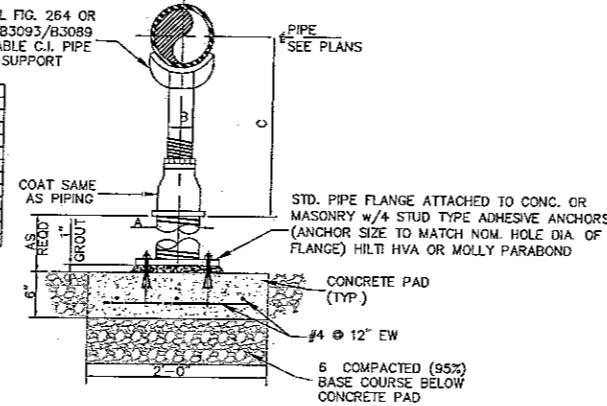


RHODES HOMES ARIZONA, LLC  
GOLDEN VALLEY RANCH WELL #1  
DETAILS  
MOHAVE COUNTY  
ARIZONA

SHEET  
**WP2**  
4 OF 20 SHEETS  
SCI PROJECT#  
18499.07.03

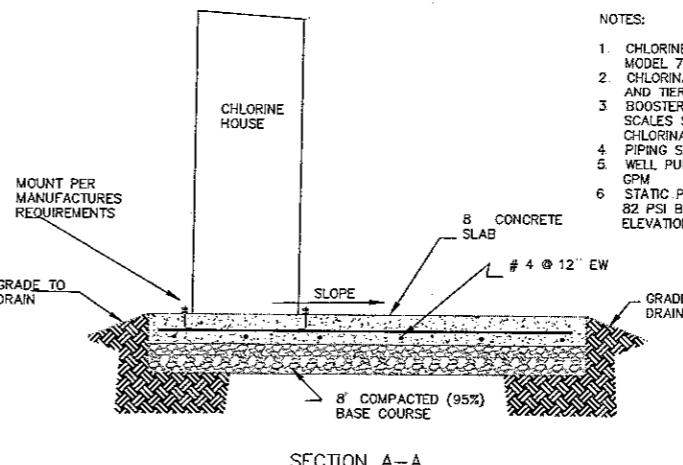


PIPE SIZE	A	B	C	
			MIN.	MAX.
4	3	2 1/2	9 1/4	10 1/2
8	3	2 1/2	11 3/4	16 1/2
10	3	2 1/2	13 1/2	18 1/2
12	3	2 1/2	15	18 3/4
14	4	3	16 1/4	20 1/2
16	4	5	17 3/4	21 1/2
18	4	3 1/2	19 1/2	24 1/2
20	5	3 1/2	20	25 1/2
24	6	4	23 3/4	28 1/2
30	5	4	25	30 3/4
48	10	6	29	33 1/2



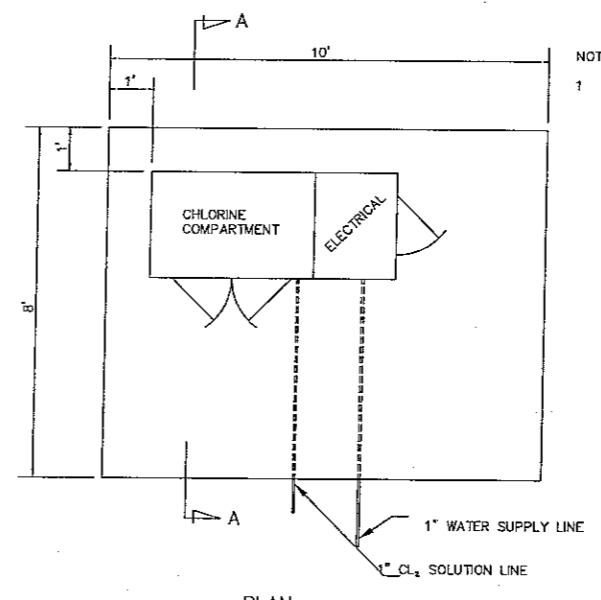
#### NOTES.

1. CHLORINE HOUSE TO BE BEVCO MODEL 7523-F OR EQUAL
2. CHLORINATOR SHALL BE WALLACE AND TIERNAN VICK OR EQUAL
3. BOOSTER PUMP AND CHLORINE SCALES SHALL BE SUPPLIED BY CHLORINATION EQUIPMENT SUPPLIER
4. PIPING SHALL BE SCHEDULE 80 PVC WELL PUMP FLOW RATE IS 1700 GPM
5. STATIC PRESSURE AT WELL HEAD IS 82 PSI BASED ON RESERVOIR ELEVATION OF 2750.



#### NOTES.

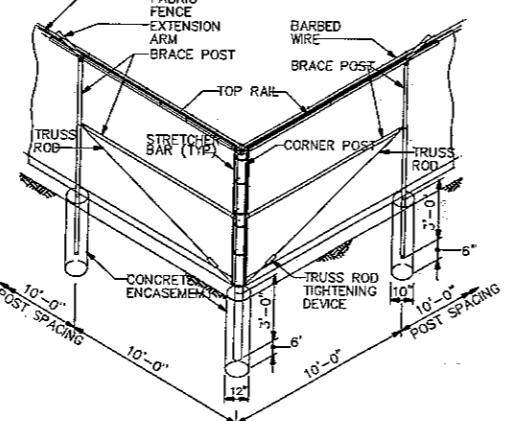
1 SEE SCHEMATIC  
FOR CHLORINATION  
EQUIPMENT  
DETAIL 5-WP2



**TYPICAL GATE INSTALLATION**

NO SCALE

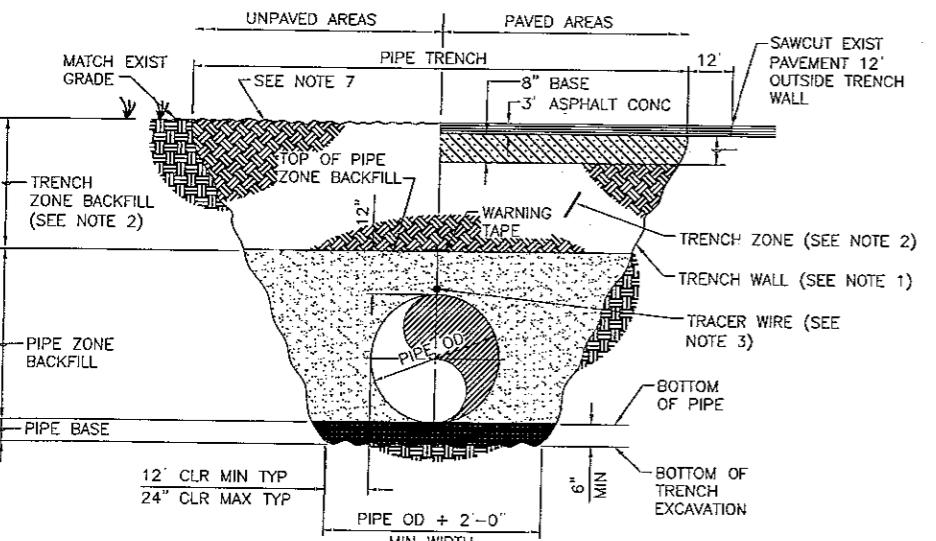
NOTES:  
ALTERNATE DETAILS MAY BE PROPOSED. REFER TO PROJECT PLANS FOR LOCATION OF FENCE.



POST INSTALLATION DETAIL

L TYPICAL GROUND ROD INSTALLATION DETAIL  
NO SCALE

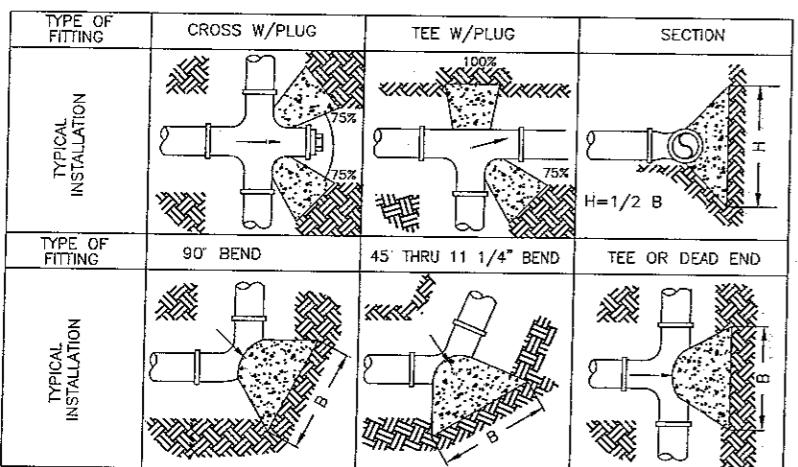
FENCE DETAIL 3  
SCALE: N.T.S. WP2



**NOTES:**

1. TRENCH SHALL MEET ALL CURRENT OSHA AND NEVADA STATE REQUIREMENTS FOR SAFETY.
2. TRENCH ZONE BACKFILL SHALL BE A MIN 48", MAX 72" AND 95% COMPACTION.
3. MIN 14 GAUGE COATED TRACER WIRE.
4. NO CONSTRUCTION VEHICLES WILL BE ALLOWED TO DRIVE OVER PIPELINE UNTIL HEIGHT OF BACKFILL IS 3 OVER TOP OF PIPE.
5. MINIMUM CLEARANCE BETWEEN PIPE O.D. AND TRENCH WALL SHALL BE 12 INCHES FOR COMPACTION PIPE ZONE MATERIAL.
6. FOR BACKFILL MATERIAL AND COMPACTION REQUIREMENTS SEE SPECIFICATIONS.
7. MOUND BACKFILL ABOVE PIPE SLOPE TO DRAIN AWAY. MAINTAIN EXISTING DRAINAGE PATTERN.

PIPE TRENCH DETAIL  
SCALE: N.T.S.



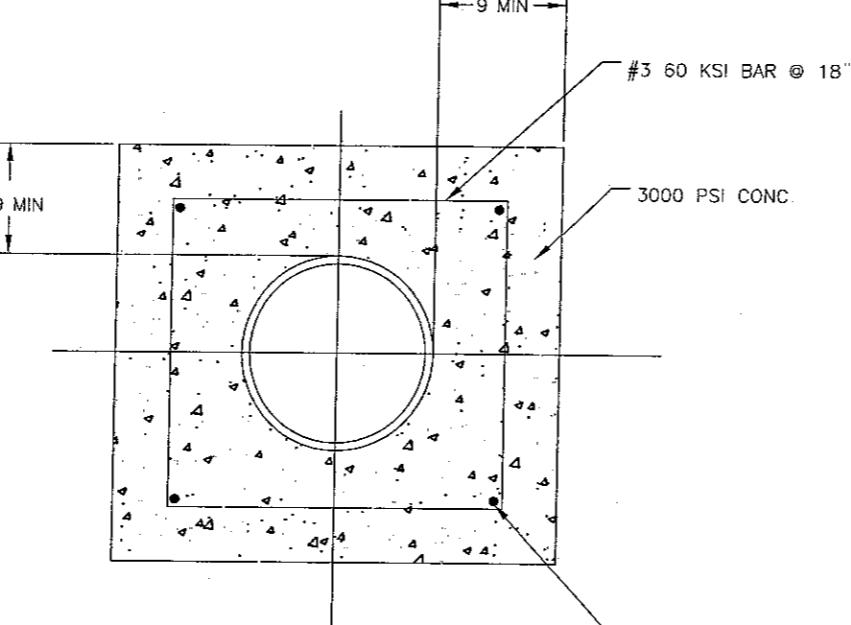
THRUST BLOCK BEARING AREA (SQ. FT.)

TYPE OF FITTING	11.25° BEND	22.5° BEND	45° BEND	90° BEND	TEE OR PLUG
4"	0.4	0.7	1.4	2.7	1.9
6"	0.8	1.7	3.2	6.0	4.2
8"	1.5	2.9	5.8	10.7	7.5
10"	2.3	4.6	9.0	16.7	11.8
12"	3.3	6.6	13.0	24.0	17.0
14"	4.5	9.0	17.7	32.7	23.1
16"	5.9	11.8	23.1	42.7	30.2
18"	7.5	14.9	29.2	54.0	38.2

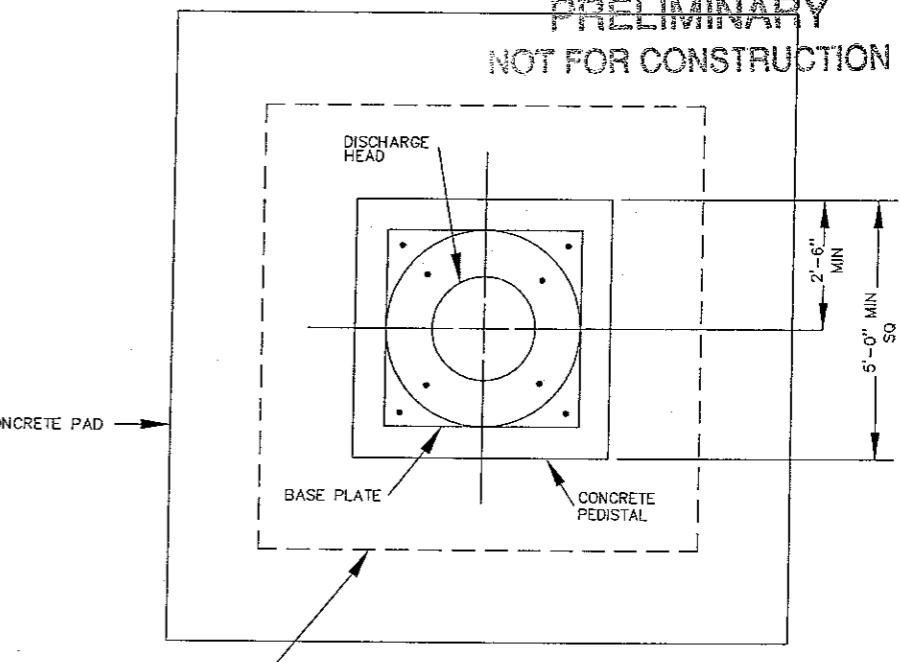
**NOTE:**

1. ALL WORK MUST BE INSPECTED PRIOR TO BACKFILL.
2. CONSTRUCT THRUST BLOCKS W/ 2000 PSI CONCRETE - CURE MINIMUM 5 DAYS.
3. AREAS ARE BASED ON 150 PSI TEST PRESSURE AND 1500 PSF BEARING CAPACITY.
4. BEARING AREAS, VOLUMES AND SPECIAL BLOCKING DETAILS SHOWN ON PLANS TAKE PRECEDENCE.
5. BLOCKS TO BE POURED AGAINST UNDISTURBED SOIL.
6. WRAP ALL METAL FITTINGS WITH 8-MIL POLYETHYLENE FILM AFTER APPLYING 2 FIELD COATS OF NO-OXIDE WAX TO NUTS & BOLTS BEFORE POURING THRUST BLOCKS.
7. INSTALLATIONS USING DIFFERENT PIPE, TEST PRESSURES AND/OR BEARING CAPACITIES ADJUST AREAS ACCORDINGLY, SUBJECT TO APPROVAL OF ENGINEER.
8. CONTRACTOR SHALL ADJUST THRUST BLOCKS IN AREAS WHERE TEST AND OPERATING PRESSURES EXCEED DESIGNED TEST PRESSURE.

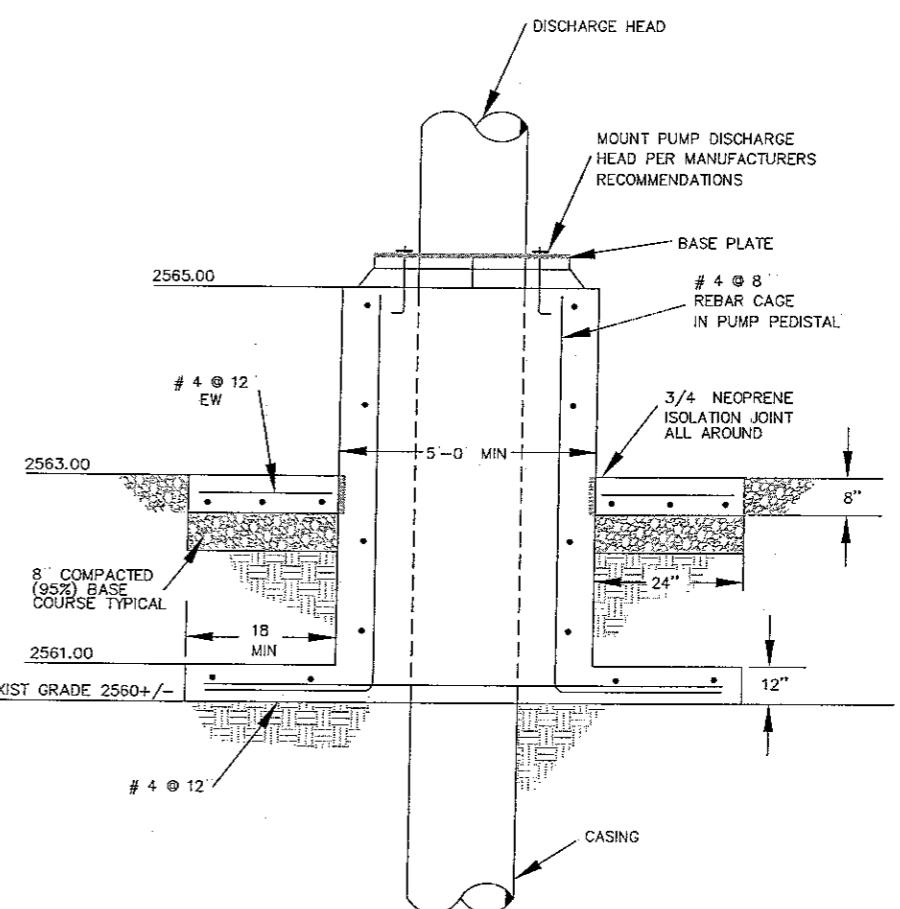
THRUST BLOCKS  
SCALE: N.T.S.



CONCRETE ENCASEMENT  
SCALE: N.T.S.



PUMP PEDISTAL PLAN  
SCALE: N.T.S.



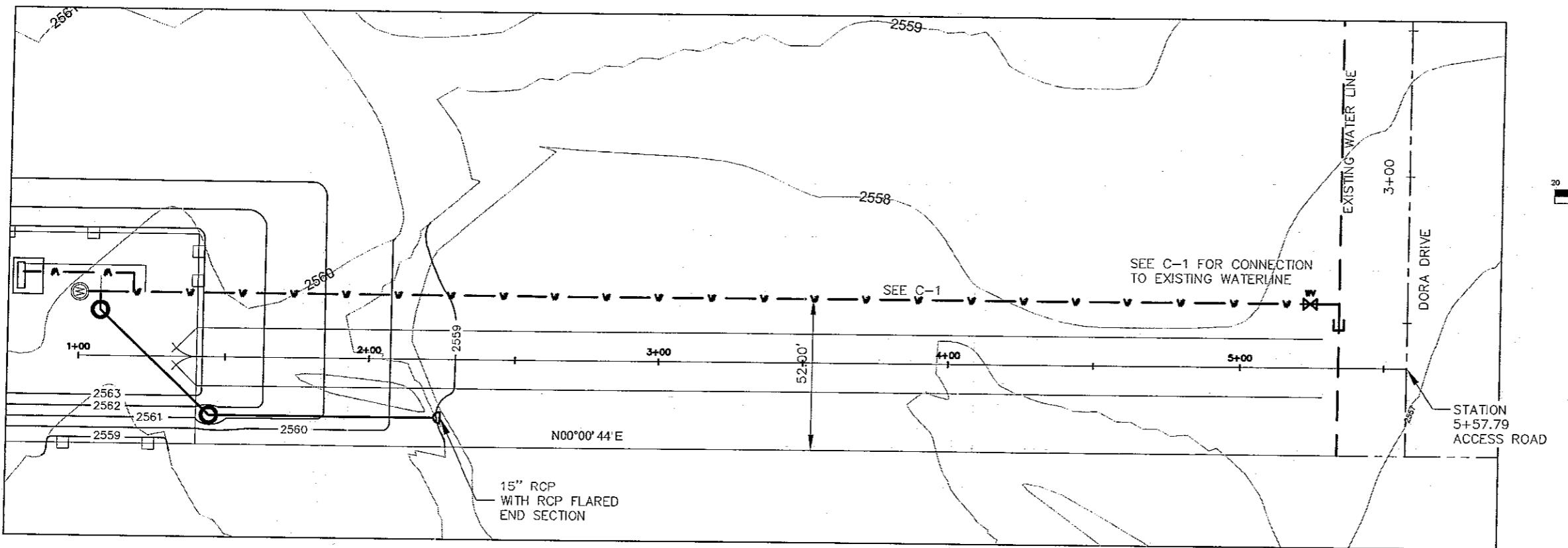
PUMP PEDISTAL  
SCALE: N.T.S.

REGISTERED PROFESSIONAL ENGINEER NO. 43932	D. KIM SØRENSEN
DATE 2/17/06	EXPIRATION
SCALE (H) 1" = 20'	SCALE (V) NA
DRAWN BY B. Curtis	CHECKED BY
DATE 02-01-2006	RECD. NO.

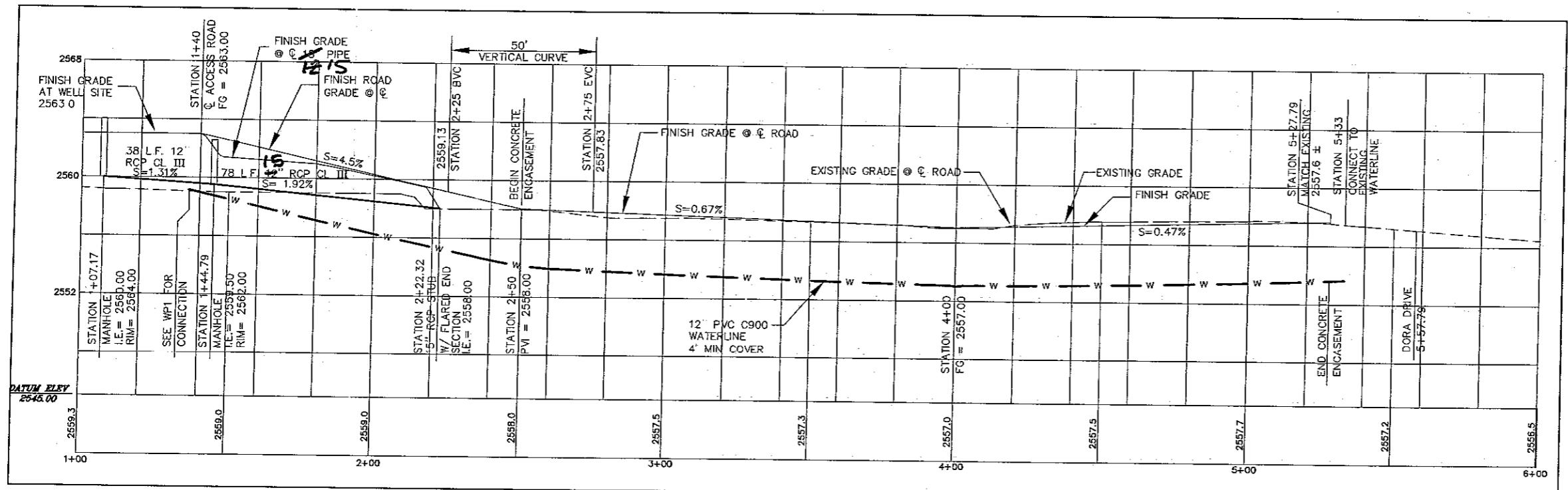
Stanley Consultants Inc.  
1820 S. Eastern Avenue, Suite 200  
Las Vegas, NV 89104-3306 (702) 369-9793  
www.stanleygroup.com

RHODES HOMES ARIZONA, LLC  
GOLDEN VALLEY RANCH WELL #1 DETAILS  
ARIZONA  
MOHAVE COUNTY

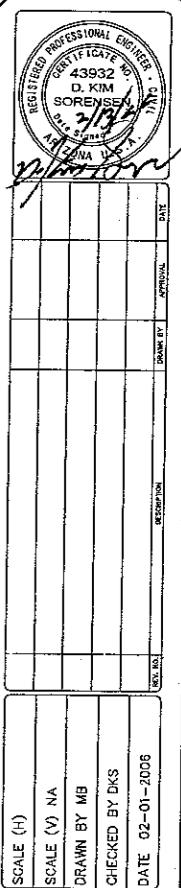
SHEET  
WP3  
5 OF 20 SHEETS  
SCI PROJECT# 18499.07.03



**PHELEMINARY**  
**NOT FOR CONSTRUCTION**



NOTE:  
ENCASE WATERLINE IN CONCRETE BELOW  
WASH SEE 4-WP3 FOR ENCASING DETAIL.



**GOLDEN VALLEY RANCH WELL #1  
DISCHARGE PIPE PLAN AND PROFILE**

SHEET  
PP1  
20 SHEETS  
PROJECT#  
99.07.03

## SCHEMATIC DIAGRAM SYMBOLS

## POWER SINGLE LINE DIAGRAM SYMBOLS

## ELECTRICAL ABBREVIATIONS

(CR)	CONTROL RELAY	HAND-AUTO OFF XO	2 POSITION SELECTOR SWITCH POSITION LEGEND: X=CLOSED 0=OPEN
(TD)	TIME DELAY RELAY	HAND-AUTO OFF XOO	3 POSITION SELECTOR SWITCH HAND - OFF - AUTO POSITION LEGEND: X=CLOSED 0=OPEN
(AR)	ALARM RELAY	O-O	NORMALLY CLOSED PUSH BUTTON
(ETM)	ELAPSED TIME METER	O-O	LOCKOUT STOP PUSH BUTTON
(M)	MOTOR STARTER OR CONTACTOR COIL	O-O	NORMALLY OPEN PUSH BUTTON
(PC)	PHOTO CELL	O-O	EMERGENCY STOP PUSH BUTTON (MAINTAINED)
(R)	BEACON ALARM LIGHT LETTER INDICATES COLOR R=RED, A=AMBER, B=BLUE G=GREEN	AMPS	DISCONNECT SWITCH SHOWN WITH RATING AND NUMBER OF POLES
(R)	PILOT LIGHT LETTER INDICATES COLOR R=RED, A=AMBER, B=BLUE G=GREEN	O-O	LIMIT OR POSITION SWITCH
(W)	OUTPUT DV/DT FILTER	PSH O-O	PRESSURE SWITCH HIGH
(W)	HEATING ELEMENT	PSL O-O	PRESSURE SWITCH LOW

(J)	JUNCTION BOX WITH POWER DISTRIBUTION BLOCK OR LUGS	AMPS O O POLES	CIRCUIT BREAKER SHOWN WITH TRIP RATING AND NUMBER OF POLES
(C)	CONDUIT SEALOFF	AMPS MCP O O POLES	MOTOR CIRCUIT PROTECTOR WITH TRIP RATING AND NUMBER OF POLES
(L)	LTC CONNECTION	AMPS O O POLES	DISCONNECT SWITCH SHOWN WITH RATING AND NUMBER OF POLES
(W)	MC CONNECTION	MMR	MOTOR MANAGEMENT RELAY
(B)	BOND TO METALLIC WATER PIPE	SSS	SOLID STATE STARTER
(U)	UTILITY METER	VFD	VARIABLE FREQUENCY DRIVE
(HP)	MOTOR, NUMBER DESIGNS NEMA HORSEPOWER SIZE	HF	HARMONIC FILTER
(F)	FUSE	EOL	ELECTRONIC OVERLOAD RELAY
(A)	FUSEHOLDER OR FUSEBLOCK		GROUND CONNECTION

A	AMPERE	JB	JUNCTION BOX
AFD	ADJUSTABLE FREQUENCY DRIVE	PNL	PANEL
AFF	ABOVE FINISHED FLOOR	PO	PULSE OUTPUT
AGF	ABOVE FINISHED GRADE	PPB	POWER PULPBOX
AI	ANALOG INPUT	PPG	POUNDS PER GALLON
AIC	AMPS INTERRUPTING CAPACITY	PPH	POUNDS PER HOUR
AO	ANALOG OUTPUT	PPM	PARTS PER MILLION
AS	AIR SUPPLY	PR	PAIR
ATS	AUTOMATIC TRANSFER SWITCH	PRES	PRESSURE
BC	BYPASS CONTACTOR	PS	PRESSURE SWITCH
C	CONDUIT	PSH	PRESSURE SWITCH, HIGH
CB	CIRCUIT BREAKER	PSI	POUNDS PER SQUARE INCH
CCW	COUNTER CLOCKWISE	PVI	PROCESS VARIABLE
CL2	CHLORINE	RAS	RETURN ACTIVATED SLUDGE
CON	CONTACTOR	RW	RAW WATER
CPB	CONTROL PULLBOX	RF	RADIO FREQUENCY
CU	COPPER BARE	RIO	REMOTE INPUT OUTPUT
CV	CONTROL VALVE	RS	RAW SEWAGE
CW	CLOCKWISE	RSP	RAW SEWAGE PUMP
DCS	DISTRIBUTED CONTROL SYSTEM	RTD	RESISTANCE TEMPERATURE DETECTOR
DI	DISCRETE INPUT	RTU	REMOTE TELEMETRY UNIT
DO	DISCRETE OUTPUT	RWT	REFLECTED WAVE TRAP
DP	DISTRIBUTION PANEL	SCA	SHORT CIRCUIT AMPS
DV/DT	DIFFERENTIAL VOLTAGE/TIME	SEQ	SERVICE ENTRANCE EQUIPMENT
DWG	DRAWING	SES	SERVICE ENTRANCE SECTION
ETM	ELAPSED TIME METER	SIC	SINGLE LOOP CONTROLLER
EOL	ELASTIC OVERLOAD	SLOS	START/LOCK-OUT-STOP
EXIST	EXISTS	SMC	SUBMERSIBLE MANUFACTURER CABLE
FA	FAIL AIR	SP2	SET POINT
FC	FAIL CLOSED	SPC	SPARE CONDUIT
FE	FLOW ELEMENT	SPR	SPARE
FLA	FULL LOAD AMPS	SS	START/STOP
FS	FLOW SWITCH	SSS	SOLID STATE STARTER (SOFT START)
FVNR	FULL VOLTAGE NON-REVERSING	ST	SHUNT TRIP
FW	FINISHED WATER	TC	TEMPERATURE CABLE
GCF	GROUND FAULT CIRCUIT INTERRUPTER	TS	TEMPERATURE SWITCH
GFP	GROUND FAULT PROTECTION	TVSS	TRANSIENT VOLTAGE SURGE
GND	GROUND	TYP	TYPICAL
GPO	GROUND	UG	UNDERGROUND
GPH	GALLONS PER DAY	UL	UNDERWRITERS LABORATORIES
GPM	GALLONS PER HOUR	UN	UNLESS NOTED OTHERWISE
GRS	GALLONS PER MINUTE	VO	VOLTAGE
H	GALVANIZED RIGID STEEL	VFD	VARIABLE FREQUENCY DRIVE
H2S	HIGH	W	WATT, WIRE
H2S	HYDROGEN SULFIDE	WAS	WASTE ACTIVATED SLUDGE
HMM	HUMAN MACHINE INTERFACE	WP	WEATHERPROOF
HDA	HAND-OFF-AUTO	XFMR	TRANSFORMER
HDR	HAND-OFF-REMOTE	XMR	TRANSFORMER
I	CURRENT	XTR	TRANSMITTER
IC	INSTRUMENTATION CABLE	ZS	POSITION (i.e. LIMIT) SWITCH
ICR	INTERMITTENT CYCLE REACTOR		
IO	INPUT/OUTPUT		
ISC	SHORT CIRCUIT CURRENT		

## TRANSFORMER

O-O

FLOW SWITCH

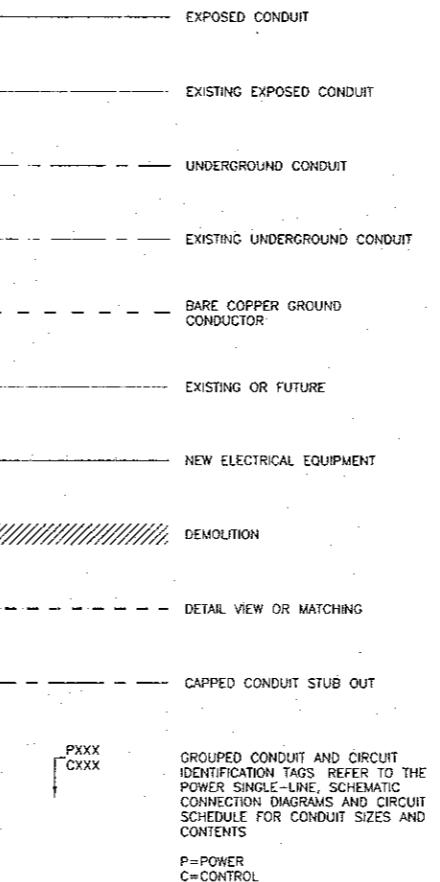
## SITE PLAN SYMBOLS

## ELECTRICAL LINETYPES

## GENERAL NOTES

(CT)	CURRENT TRANSFORMER	O-O	LEVEL FLOAT SWITCH
(G)	GROUND CONNECTION	O-T ICTO	TIMER RELAY CONTACT INSTANTANEOUS CLOSE TIME DELAY OPEN
(G)	GENERATOR	O-T NOTC	TIMER RELAY CONTACT NORMALLY OPEN TIME DELAY CLOSE
(H)	HORN	O-O	TEMPERATURE SWITCH
(H)	FULL VOLTAGE NON-REVERSING (FVNR) MOTOR STARTER OR CONTACTOR NUMBER DESIGNS NEMA SIZE	O-O	FUSE
(N)	NORMALLY OPEN CONTACT	O-O	FUSEHOLDER OR FUSEBLOCK
(N)	NORMALLY CLOSED CONTACT	O-O	Thermal OVERLOAD RELAY
(RTU)	RTU OR PLC CONTACT	■	TERMINAL BLOCK
(RTU)	DEVICE LOCATED AT REMOTE LOCATION	△	CONDUIT SEALOFF

## CIRCUIT SCHEDULE LEGEND



- THE COMPLETED INSTALLATION SHALL COMPLY WITH LATEST REVISION OF APPLICABLE FEDERAL STATE, AND LOCAL CODES, ORDINANCES, AND REGULATIONS. THE CONTRACTOR SHALL OBTAIN NECESSARY PERMITS AND INSPECTIONS REQUIRED BY THE AUTHORITIES HAVING JURISDICTION. ALL WORK SHALL BE COMPLETED IN A NEAT, WORKMANLIKE MANNER IN ACCORDANCE WITH THE LATEST NECA STANDARDS OF INSTALLATION UNDER COMPETENT SUPERVISION. INSTALL GROUNDING PER NEC.
- VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND OTHER FACTORS, WHICH MAY AFFECT THE EXECUTION OF THE WORK. INCLUDE ALL RELATED COSTS IN THE INITIAL BID PROPOSAL.
- THE CONTRACTOR SHALL COORDINATE WORK WITH THE UTILITIES PROVIDING SERVICES ON THIS PROJECT, AND SHALL COMPLY WITH ALL THEIR INSTALLATION REQUIREMENTS.
- ALL MATERIALS SHALL BE NEW AND OF THE BEST QUALITY, MANUFACTURED IN ACCORDANCE WITH THE LATEST REVISION OF NEMA, ANSI, UL, OR OTHER APPLICABLE STANDARDS. THE USE OF MANUFACTURERS' NAMES, MODELS, AND NUMBERS IS INTENDED TO ESTABLISH STYLE, QUALITY, APPEARANCE, USEFULNESS, AND BID PRICE.
- PROTECT ALL ELECTRICAL MATERIAL AND EQUIPMENT INSTALLED AGAINST DAMAGE BY OTHER TRADES WEATHER CONDITIONS, OR ANY OTHER PREVENTABLE CAUSES. EQUIPMENT DAMAGED DURING SHIPPING OR CONSTRUCTION, PRIOR TO ACCEPTANCE BY THE ENGINEER OR THE OWNER, WILL BE REJECTED AS DEFECTIVE.
- LEAVE THE SITE CLEAN REMOVE ALL DEBRIS, EMPTY CARTONS, TOOLS, CONDUIT, WIRE SCRAPS AND ALL MISCELLANEOUS SPARE EQUIPMENT AND MATERIALS USED IN THE WORK DURING CONSTRUCTION. ALL COMPONENTS SHALL BE FREE OF DUST, GRIT AND FOREIGN MATERIALS LEFT AS NEW BEFORE FINAL ACCEPTANCE OF WORK. DAMAGED PAINT AND FINISHES SHALL BE TOUCHED UP OR REPAINTED WITH MATCHING COLOR PAINT AND FINISH.
- CIRCUIT CONDUCTORS #6 AWG OR SMALLER SHALL BE THHN STRANDED COPPER. #4 AWG THROUGH #2 AWG SHALL BE XHHW STRANDED COPPER. #1 AWG OR LARGER SHALL BE XHHW-2 STRANDED COPPER. MINIMUM POWER CONDUCTOR SIZE SHALL BE #12 AWG WITH #12 AWG GROUND.
- UNDERGROUND CONDUITS SHALL BE SCHEDULE 40 PVC. MINIMUM CONDUIT DEPTH SHALL BE 24 INCHES. MINIMUM UNDERGROUND CONDUIT SIZE SHALL BE 1 INCH.
- CONDUITS SHALL BE MARKED AT EACH END WITH MATCHING NUMBERED BRASS TAGS. SPARE CONDUITS SHALL HAVE A FULL STRING INSTALLED SECURED AND CAPPED.
- EXPOSED CONDUITS SHALL BE GALVANIZED RIGID STEEL (GRS). MINIMUM SIZE 3/4 INCH UNLESS OTHERWISE NOTED ON THE PLANS.
- SAFETY SWITCHES, ELECTRICAL DISTRIBUTION EQUIPMENT, CONTROL PANELS, AND OTHER ELECTRICAL DEVICES SHALL BE UL LISTED AND RATED FOR HEAVY DUTY SERVICE.
- WIRING DEVICES SHALL BE SPECIFICATION GRADE.
- THE CONTRACTOR IS RESPONSIBLE FOR MANAGING, SCHEDULING, DOCUMENTING, AND PERFORMING THE WORK SO THAT A COMPLETE ELECTRICAL, INSTRUMENTATION AND CONTROL SYSTEM FOR THE FACILITY IS PROVIDED, ACCURATE SHOP AND RECORD DRAWINGS, AND O&M MANUALS SHALL BE SUBMITTED PRIOR TO FINAL ACCEPTANCE OF THE WORK.
- Typical details shall apply in all cases, whether specifically referred to or not.

RHODES HOMES ARIZONA, LLC

GOLDEN VALLEY RANCH WELL #1  
STANDARD ELECTRICAL SYMBOLS AND  
LEGEND  
MOKHAH COUNTY5820 S. Eastern Avenue, Suite 200  
Las Vegas, Nevada 89119  
(702) 559-9398 Fax: (702) 559-9793  
www.stanleygroup.com31724  
31724  
3550 N. Central Ave.  
Phoenix, AZ 850123550 N. Central Ave.  
Phoenix, AZ 85012E001  
7 OF 20 SHEETS  
SCI PROJECT#  
18449.07.03

90%

PRELIMINARY  
NOT FOR  
CONSTRUCTION

DRAWN BY GAF

CHECKED BY BDD

DATE 3/7/2006

SCALE (H) NONE

SCALE (V) NONE

DRAWN BY GAF

CHECKED BY BDD

DATE 3/7/2006

SCALE (H) NONE

SCALE (V) NONE

DRAWN BY GAF

CHECKED BY BDD

DATE 3/7/2006

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DATE 3/7/2006

SCALE (H) NONE

SCALE (V) NONE

DRAWN BY GAF

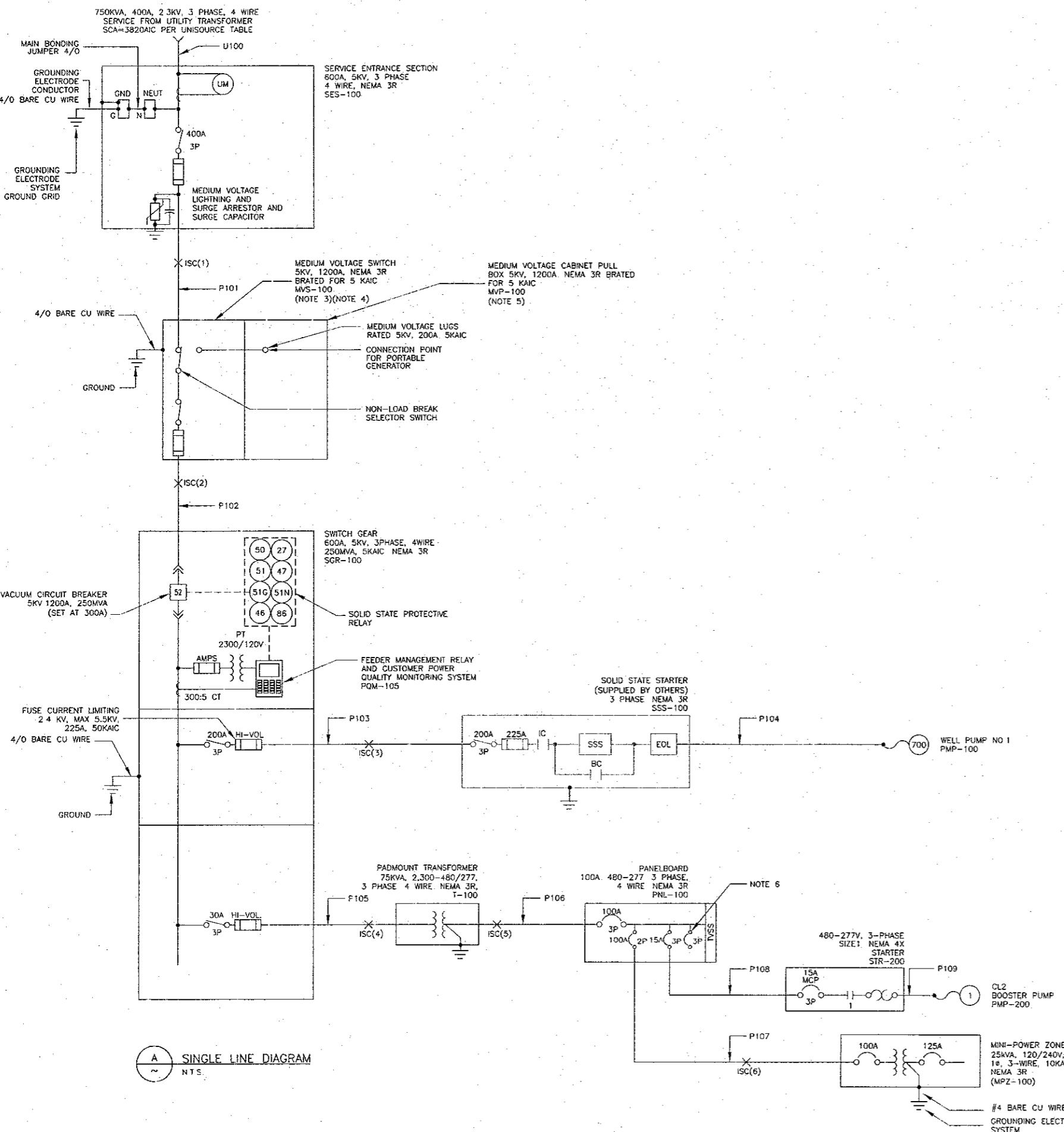
CHECKED BY BDD

DATE 3/7/2006

SCALE (H) NONE

SCALE (V) NONE

DRAWN BY GAF

**NOTES:**

- ALL SHORT CIRCUIT INTERRUPTING AND PROTECTING DEVICES SHALL HAVE A SHORT CIRCUIT INTERRUPTING RATING EQUAL TO OR GREATER THAN THE AVAILABLE SHORT CIRCUIT ON THE BUS
- FUSES SHALL BE SIZED PER THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS
- MEDIUM VOLTAGE SWITCH SHALL INCLUDE A MOTOR-ASSISTED SWITCH FOR MANUAL OPERATION
- CONTRACTOR SHALL PROVIDE AUX CONTACTS FOR LOAD INTERRUPTER SWITCH POSITION INDICATION
- CONTRACTOR SHALL PROVIDE MEDIUM VOLTAGE LUGS RATED FOR 5KV, 1200A, 5KAIC AND CONNECT THE LOADSIDE OF THE CABINET TO NORMALLY OPEN SIDE OF MANUAL TRANSFER SWITCH
- FUTURE IRRIGATION PUMP CIRCUIT BREAKER SIZE IS YET TO BE DETERMINED



DATE	REVISION	DRAWN BY	APPROVED
3/7/2006			

SCALE (H) NONE  
SCALE (V) NONE  
DRAWN BY GAF  
CHECKED BY BBD  
DATE 3/7/2006

CALLOUT NO.	NO. SETS	CONDUIT SIZE	CIRCUIT CONDUCTORS	CIRCUIT NO.'S
P101	1	4"	3 - 1/0, MV-105 TYPE, #6 GND	MVS100-P1
P102	1	4"	3 - 1/0, MV-105 TYPE, #6 GND	SGR100-P1
P103	1	3"	3 - 1/0, MV-105 TYPE, #6 GND	SSS100-P1
P104	1	3"	3 - 1/0, MV-105 TYPE, #6 GND	PMP100-P1
P105	1	3"	3 - # 8, MV-105 TYPE, #8 GND	T100-P1
P106	1	2"	4 - 1/0, #6 GND	PNL100-P1
P107	1	1.5"	3 - # 2, #4 GND	MPZ100-P1
P108	1	1"	3 - # 12, #12 GND	STR200-P1
P109	1	.75	3 - # 12, #12 GND	PMP200-P2

**B CIRCUIT SCHEDULE NTS**

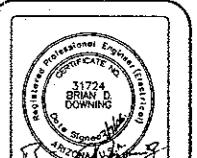
CIRCUIT/DESCRIPTION	KVA	HP	FLA
MOTOR LOADS			
WELL PUMP MOTOR PMP-100		700.0	156.0
NON-MOTOR LOADS			
THREE PHASE TRANSFORMER	75.0		18.0
SUBTOTAL			174.0
+ 25% OF LARGEST MOTOR			39.0
TOTAL AMPS @ 2400V/3PHASE			213.0
EXISTING SERVICE SIZE (AMPS)			400.0

**C LOAD CALCULATIONS NTS**

TYPE	SYMBOL	DESCRIPTION	MOUNTING	MANUFACTURER
1		120V 4 ENCLOSED AND GASKETED FLUORESCENT FIXTURE, (2) 32W 18 LAMPS, AND (1) ELECTRONIC T-B BALAST SUITABLE FOR CORROSIVE LOCATIONS.	SURFACE	HOLophane Triparalite with PermaProtect Corrosion Resistant Finish or Equal
2		120V FLOOD LIGHT, ONE PIECE DE CAST ALUMINUM CYLINDRICAL REFLECTOR, DE CAST ALUMINUM TWIN KNOB SWIVEL SPECULAR ALUMINUM REFLECTOR, UL LISTED FOR OUTDOOR USE, 25W METAL HALIDE LAMP RATED FOR UNIVERSAL BURNING POSITION. NUMBER OF HEADS AS PER DETAIL A BELOW.	3-FIXTURE MOUNT 12' POLE	GARCO DF12 SERIES, ISI DORAL SERIES, KIM AFL SERIES, OR EDGEE FULL CUT-OFF LIGHT DISTRIBUTION PATTERN.

**D LIGHT FIXTURE SCHEDULE NTS**

NAME	DATE
31724	BRAN D. DOWNEY
3550 N. Central Ave. Ste. 1800, Phoenix, AZ 85012	
Stanley Consultants Inc.	
5820 S. Eastern Avenue, Suite 200 Las Vegas, Nevada 89119 (702) 369-3296 Fax (702) 369-3793 <a href="http://www.stanleygroup.com">www.stanleygroup.com</a>	
PHOENIX HOMES ARIZONA, LLC	
GOLDEN VALLEY RANCH WELL #1 SINGLE LINE AND LOAD CALCULATIONS	
ARIZONA MARICOPA COUNTY	
SHEET	E002
8 OF 20 SHEETS	
SCI PROJECT #	18449.07.03
90% PRELIMINARY	NOT FOR CONSTRUCTION



**Stanley Consultants Inc.**

5620 S. Eastern Avenue, Suite 200  
Las Vegas, Nevada 89119  
(702) 356-9395 Fax (702) 356-9793  
[www.stanleygroup.com](http://www.stanleygroup.com)

RHODES HOMES ARIZONA, LLC

GOLDEN VALLEY RANCH WELL #1  
PANEL SCHEDULE AND SHORT  
CIRCUIT CALCULS  
ARIZONA  
MOHAVE COUNTY

SHEET  
E003  
9 OF 20 SHEETS  
SCI PROJECT #  
18449.07.03

PANEL TAG No. PNL-100			NEMA TYPE/MOUNTING 3R/SURFACE												
LOCATION ELECTRICAL EQUIPMENT LINE UP			MAIN DEVICE 100A MCB												
BUS AMPACITY 100			AIC RATING 10K												
VOLTS 460			FED FROM T-100												
PHASE/WIRE CONFIG. 3-PHASE/4-WIRE			ACCESSORIES TVSS												
REMARKS			NOTE 1: PROVIDE BREAKER PER MANUF. RECOMMENDATIONS												
LOAD VA	PHASE A	PHASE B	PHASE C	LOAD DESCRIPTION	WIRE SIZE	DEMAND	BKR	BKR. NO.	BKR	DEMAND	WIRE SIZE	LOAD DESCRIPTION	PHASE A	PHASE B	PHASE C
560				CHLORINE BOOSTER PUMP	#12	1.00	15/3	1 2	100/2	1.24	#4	MINI POWER ZONE	5532		
560				CHLORINE BOOSTER PUMP	#12	1.00	15/3	3 4		1.24	#4	MINI POWER ZONE		3062	
560				CHLORINE BOOSTER PUMP	#12	1.00		5 6	20/1			SPARE		0	
0				SPARE			20/1	7 8				SPACE	0		
0				SPARE			20/1	9 10				SPACE	0		
0				SPARE			20/1	11 12				SPACE	0		
0				SPARE			15/3	13 14				SPACE	0		
0				SPARE			15/3	15 16				SPACE	0		
0				SPARE			15/3	17 18				SPACE	0		
0				SPACE				19 20				(FUTURE IRRIGATION PUMP)	0		
0				SPACE				21 22				(FUTURE IRRIGATION PUMP)	0		
0				SPACE				23 24				(FUTURE IRRIGATION PUMP)	0		
0				SPACE				25 26				TVSS (NOTE 1)	0		
0				SPACE				27 28				TVSS (NOTE 1)	0		
0				SPACE				29 30				TVSS (NOTE 1)	0		
560	560	560	560	CONNECTED VA								CONNECTED VA	5532	3062	0
560	560	560	560	DEMAND VA								DEMAND VA	6860	3797	0
Each branch circuit phase conductor shall have an equipment grounding conductor sized per N.E.C. Article 250			VA		AMPS		TOTAL PANEL CONNECTED LOAD		6092		3822		560		
			10274		12.36		TOTAL DEMAND VA - PER PHASE		7420		4357		560		
			TOTAL PANEL DEMAND LOAD		12337		TOTAL DEMAND PHASE AMPS		28.8		15.7		2.0		
			PANEL DEMAND FACTOR		120%										

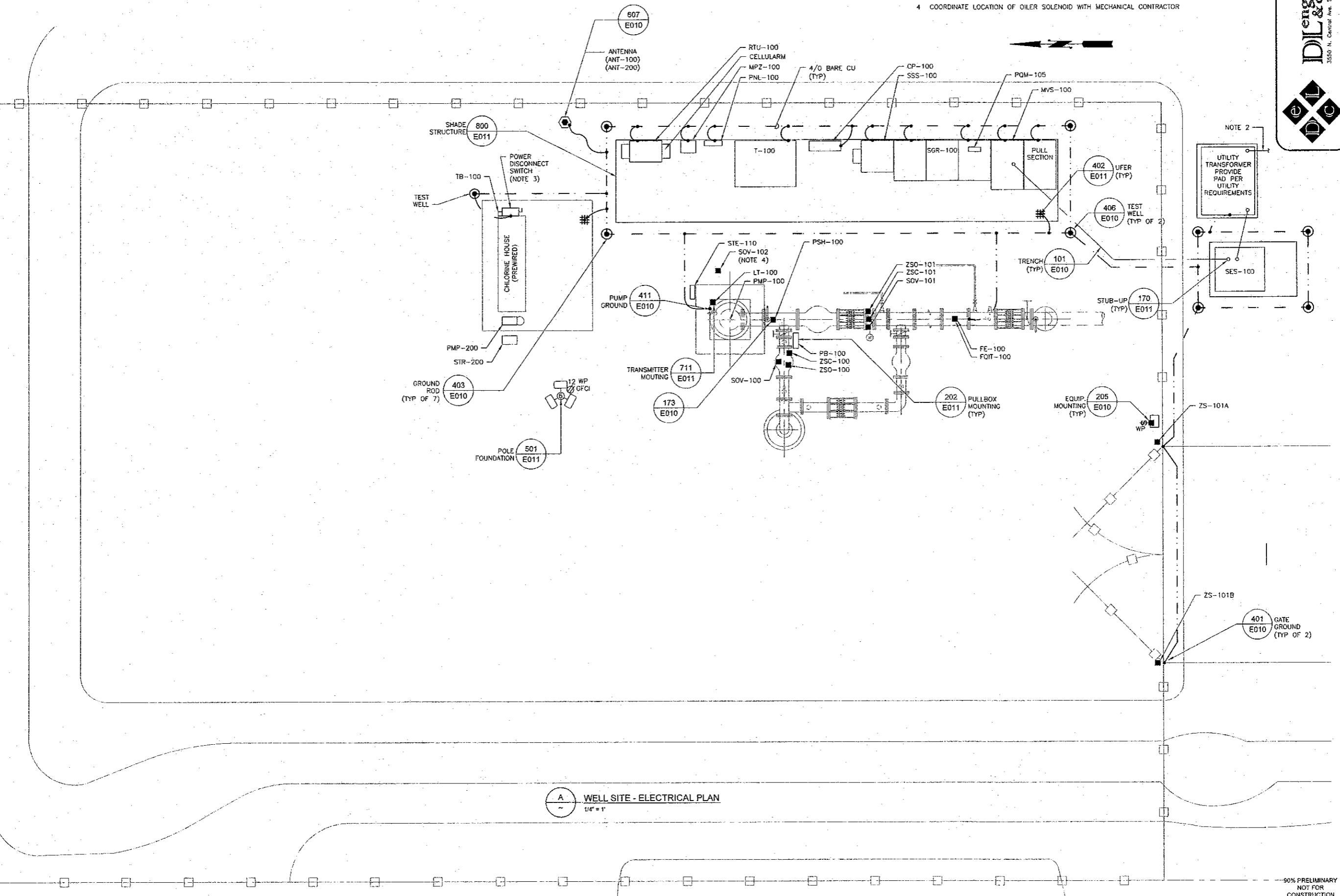
SHORT CIRCUIT CALCULATIONS	
DEFINITIONS	FORMULAS
ISC = SHORT CIRCUIT CURRENT (AMPS)	3 PH: $f = \frac{1.732 \times L \times Isc}{N \times C \times V_{LL}}$
N = NUMBER OF CONDUCTORS/PHASE	1 PH: $f = \frac{2 \times L \times Isc}{N \times C \times V_{LL}}$
L = LENGTH OF CONDUCTOR (FEET)	
C = CONSTANT FROM TABLE OF "C"	
Isc = AVAILABLE SHORT-CIRCUIT AMPS	
V <sub>LL</sub> = LINE TO LINE VOLTAGE (VOLTS)	
V <sub>P</sub> = PRIMARY VOLTAGE	
V <sub>s</sub> = SECONDARY VOLTAGE	
% Z = TRANSFORMER % IMPEDANCE	1 PH XFMR: $f = \frac{Is \times V_P \times \% Z}{100,000 \times KVA}$

ISC(1)	$f_1 = \frac{1.732 \times 25 \times 4,924}{1 \times 9033 \times 2300} = 0.0103$
M =	$\frac{1}{1 + 0.0103} = 0.9898$
ISC(1) =	$4,924 \times 0.9898 = 4,874 \text{ A}$
ISC(2)	$f_2 = \frac{1.732 \times 25 \times 4,874}{2 \times 9033 \times 2300} = 0.0051$
M =	$\frac{1}{1 + 0.0051} = 0.9949$
ISC(2) =	$4,874 \times 0.9949 = 4,849 \text{ A}$
ISC(3)	$f_3 = \frac{1.732 \times 25 \times 4,849}{1 \times 9033 \times 2300} = 0.0101$
M =	$\frac{1}{1 + 0.0101} = 0.99$
ISC(3) =	$4,849 \times 0.99 = 4,801 \text{ A}$
ISC(4)	$f_4 = \frac{1.732 \times 25 \times 4,801}{1 \times 1555 \times 2300} = 0.0581$
M =	$\frac{1}{1 + 0.0581} = 0.9451$
ISC(4) =	$4,801 \times 0.9451 = 4,537 \text{ A}$
ISC(5)	TRANSFORMER (T-100) SECONDARY (ISC(5))
$f_4 = \frac{3,583 \times 4157 \times 3}{100000 \times 75} = 5.958$	
M =	$\frac{1}{1 + 5.958} = 0.144$
$V_p/V_s = \frac{2400}{480} = 5$	
ISC(5) =	$3,583 \times 0.144 \times 5 = 2,580 \text{ A}$
ISC(6)	
$f_1 = \frac{2 \times 25 \times 2,580}{2 \times 3825 \times 240} = 0.0703$	
M =	$\frac{1}{1 + 0.0703} = 0.9343$
ISC(6) =	$2,580 \times 0.9343 = 2,410 \text{ A}$

PANEL TAG No. MPZ-100			NEMA TYPE/MOUNTING 3R/SURFACE											
LOCATION ELECTRICAL EQUIPMENT LINEUP			MAIN DEVICE 125A MCB											
BUS AMPACITY 125A			AIC RATING 10K											
VOLTS PHASE, WIRE 240 V/120V 1-PHASE, 3-WIRE			FED FROM PNL-100											
REMARKS 25KVA MINI-POWER ZONE			ACCESSORIES											
LOAD VA	PHASE A	PHASE B	LOAD DESCRIPTION	WIRE SIZE	DEMAND	BKR	BKR. NO.	BKR	DEMAND	WIRE SIZE	LOAD VA	PHASE A	PHASE B	
3600			CHLORINATION HOUSE-BEVCO	#6	1.25	30/1	1 2	20/2	1.25	#12	RTU CABINET AC UNIT NO.1	771		
20			WELL SITE FLOWMETER	#12	1.25	20/1	3 4		1.25	#12	RTU CABINET AC UNIT NO.1		771	
0			SPARE			20/1	5 6	20/1	1.25	#12	POLE LIGHTING	0		
360			SITE RECEPTACLES	#12	1.00	20/1	7 8	20/1	1.25	#12	SITE LIGHTING	960		

NOTES:

- 1 PROVIDE AND INSTALL A MANUFACTURER'S 30 AMP EIGHT-SPACE PANELBOARD TO PROVIDE SERVICE FOR ENCLOSURE ELECTRICAL LOADS AS WELL AS LEAK DETECTOR RECEIVER POWER SUPPLY.
- 2 COORDINATE UTILITY TRENCH CONDUIT AND PAD PRIOR TO PERFORMING ANY WORK
- 3 CHLORINE HOUSE IS SUPPLIED AS A PREWIRED UNIT IT WILL REQUIRE 10 POWER AND SIGNAL/ALARM CIRCUITS TO RTU
- 4 COORDINATE LOCATION OF OILER SOLENOID WITH MECHANICAL CONTRACTOR



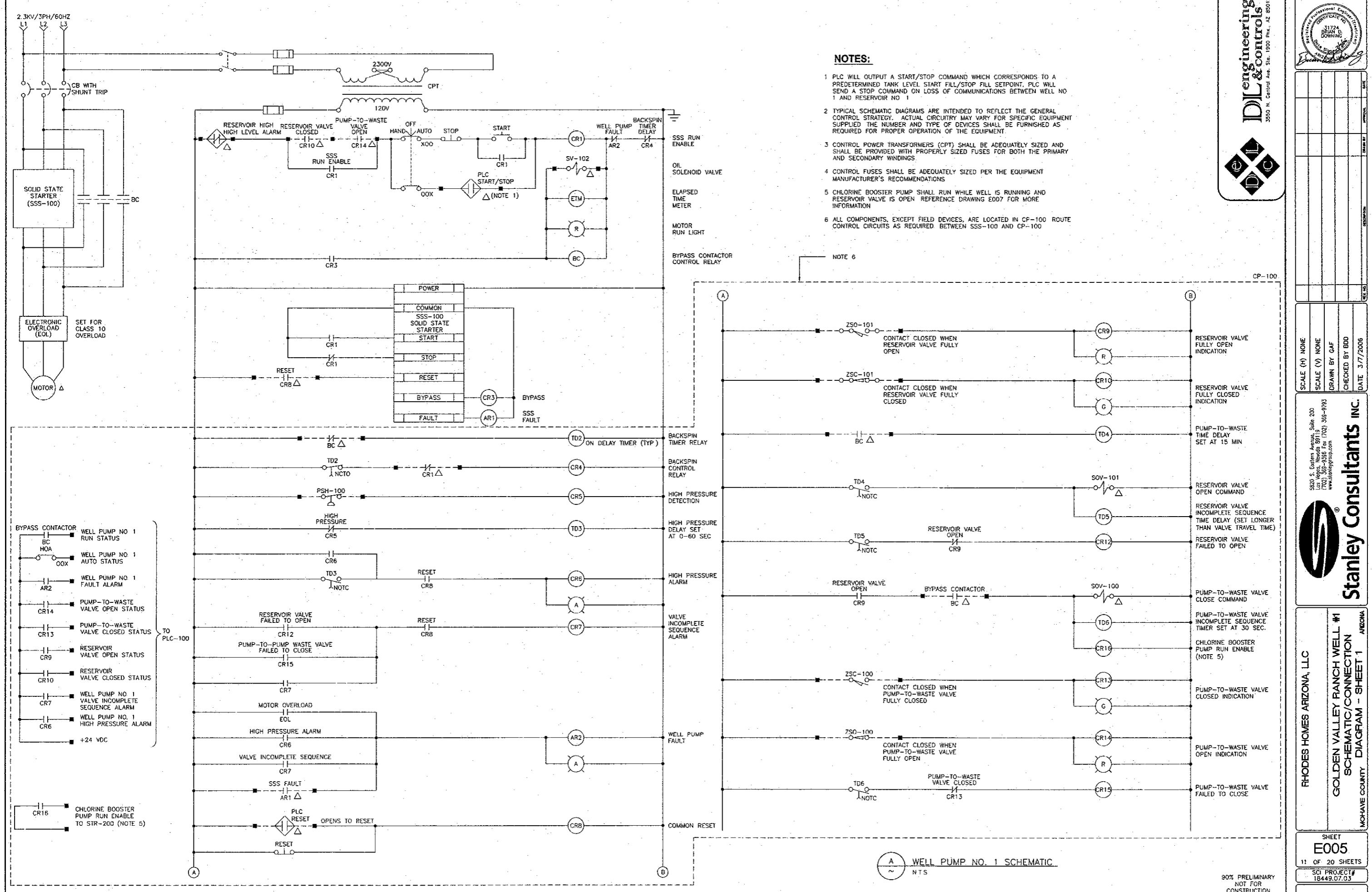
RHODES HOMES ARIZONA, LLC

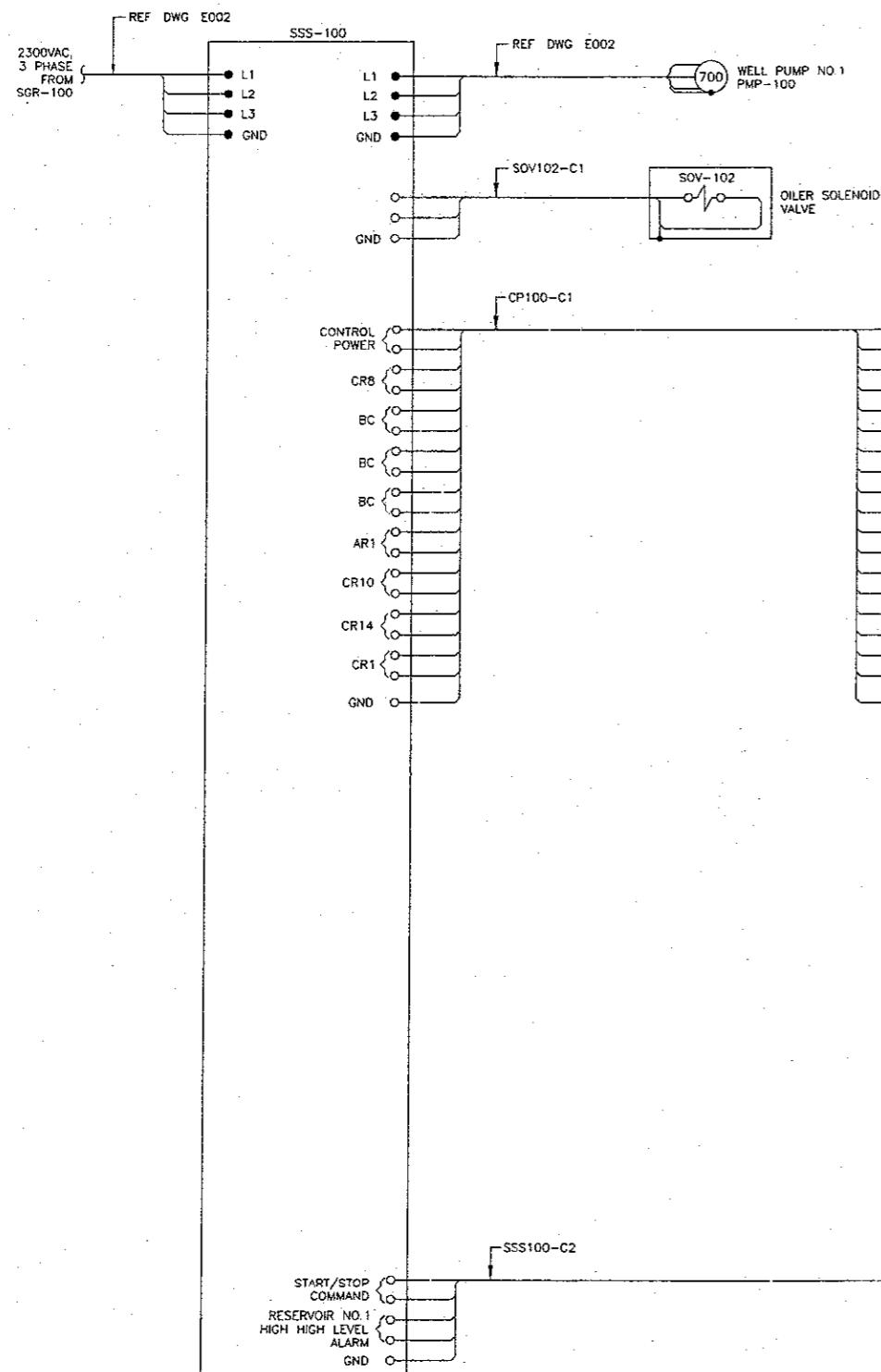
**GOLDEN VALLEY RANCH WELL #1  
POWER AND GROUNDING PLAN**  
MOKACHE COUNTY

**Stanley Consultants INC.**  

 5620 S. Eastern Avenue, Suite 200  
 Las Vegas, Nevada 89119  
 (702) 369-9386 Fax (702) 369-9793  
 www.stanleygroup.com

**SHEET E004**  
 10 OF 20 SHEETS  
 SCI PROJECT# 18449.07.03  
 DWG FILE: 17150\_E004.kwg  
 PLOTTED: Mar 07, 2006 dition



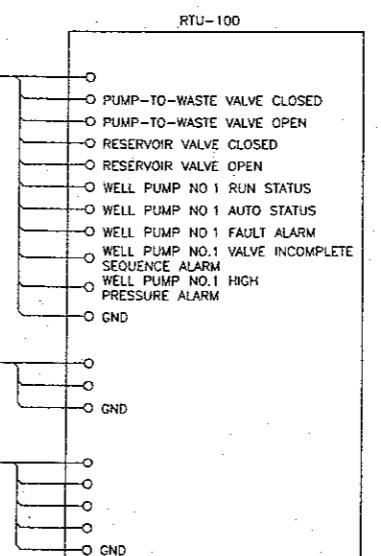
A WELL PUMP NO.1 CONNECTION DIAGRAM

## NOTES:

- 1 TYPICAL SCHEMATIC DIAGRAMS ARE INTENDED TO REFLECT THE GENERAL CONTROL STRATEGY. ACTUAL CIRCUITRY MAY VARY FOR SPECIFIC EQUIPMENT SUPPLIED. THE NUMBER AND TYPE OF DEVICES SHALL BE FURNISHED AS REQUIRED FOR PROPER OPERATION OF THE EQUIPMENT
- 2 CONTROL FUSES SHALL BE ADEQUATELY SIZED PER THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS
- 3 CONNECTIONS TO PLC INPUTS AND OUTPUTS ARE SHOWN IN A SIMPLIFIED MANNER. REFERENCE TYPICAL I/O CONNECTION DIAGRAMS IN RTU DESIGN PACKAGE FOR ADDITIONAL INFORMATION
- 4 CHLORINE BOOSTER PUMP SHALL RUN WHILE WELL IS RUNNING AND RESERVOIR VALVE IS OPEN. REFERENCE DRAWING E005 FOR MORE INFORMATION

CIRCUIT SCHEDULE	
CIRCUIT NO.	CONDUCTORS
CP100-C1	18 - #14, #14 GND
SSS100-C2	4 - #14, #14 GND
CP100-C3	2 - #14, #14 GND
CP100-C2	10 - #14, #14 GND
CP100-C4	2 - #14, #14 GND
ZSO100-C1	2 - #14, #14 GND
ZSC100-C1	2 - #14, #14 GND
ZSO101-C1	2 - #14, #14 GND
ZSC101-C1	2 - #14, #14 GND
PSH100-C1	2 - #14, #14 GND
SOV100-C1	2 - #14, #14 GND
SOV101-C1	2 - #14, #14 GND
SOV102-C1	2 - #14, #14 GND
SSS100-C1	10 - #14, #14 GND

B WELL PUMP NO.1 CIRCUIT SCHEDULE



Dwg File: E11750\_E006.dwg  
Plotted: Mar 07, 2006  
DWG FILE: E11750\_E006.dwg

RHODES HOMES ARIZONA, LLC  
GOLDEN VALLEY RANCH WELL #1  
SCHEMATIC/CONNECTION DIAGRAM  
- SHEET 2  
MOHAVE COUNTY

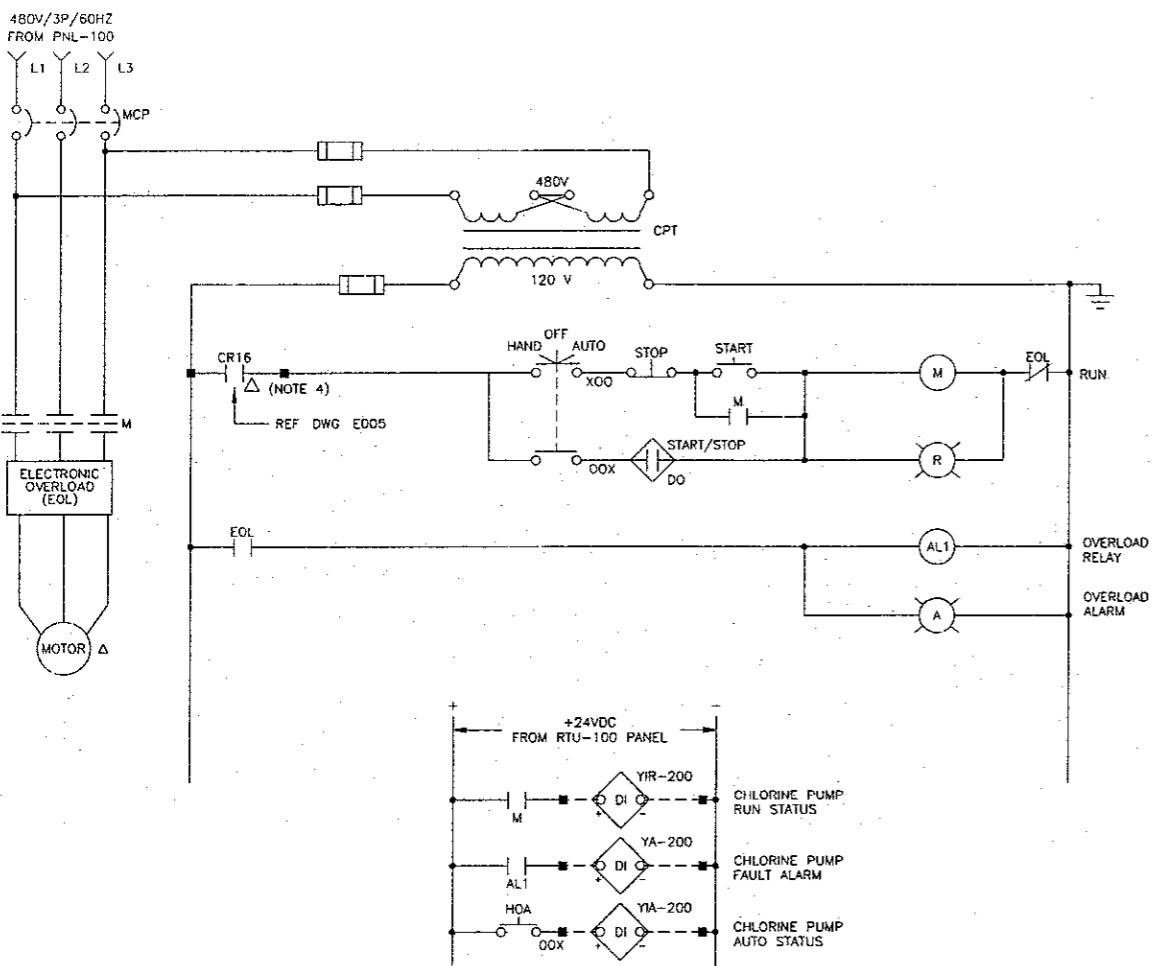
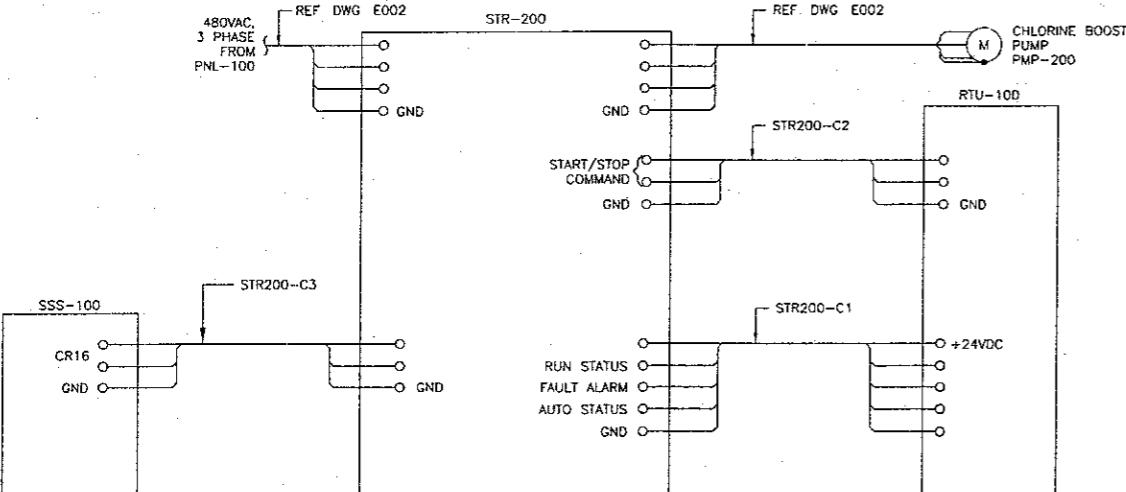
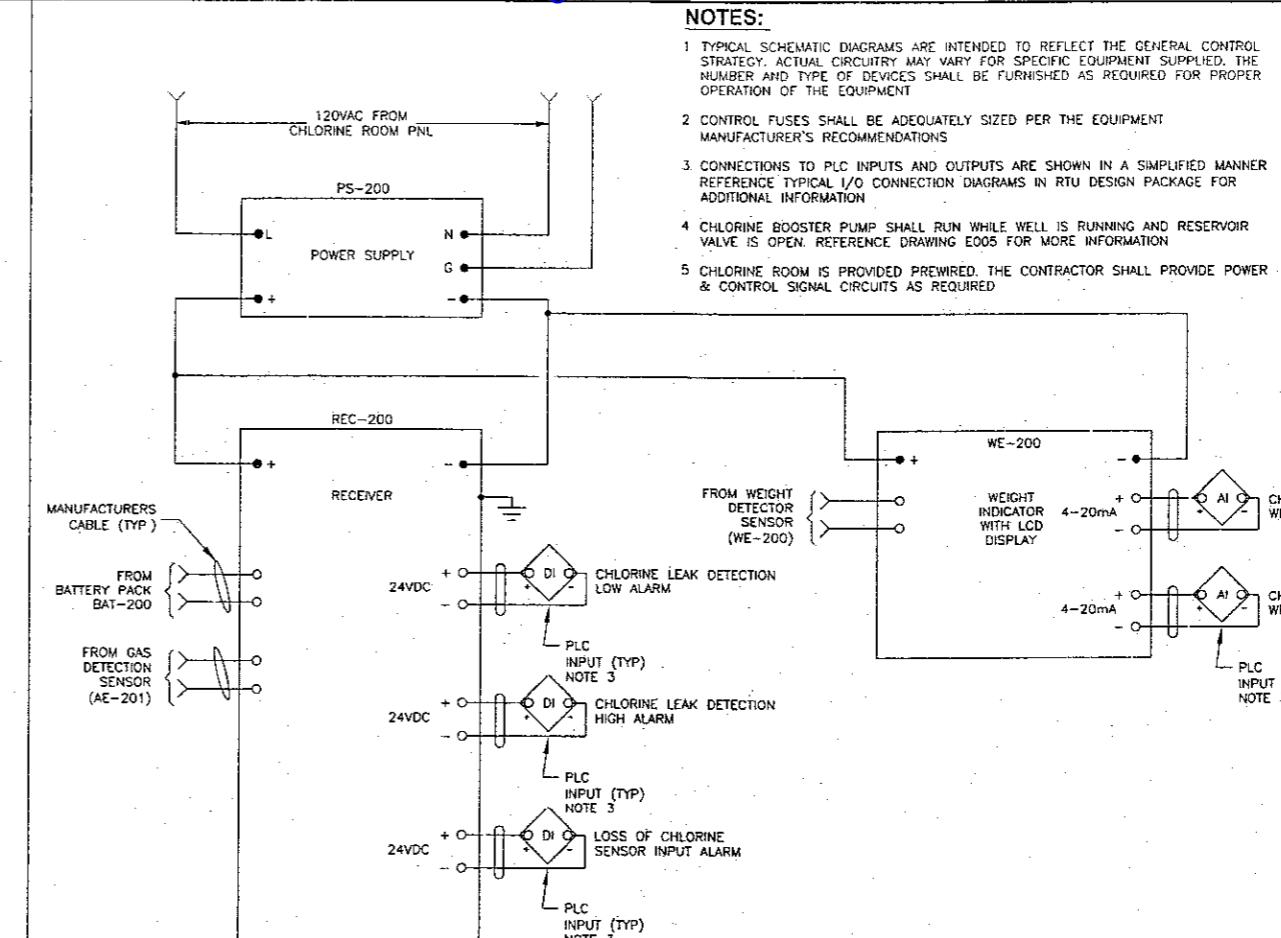
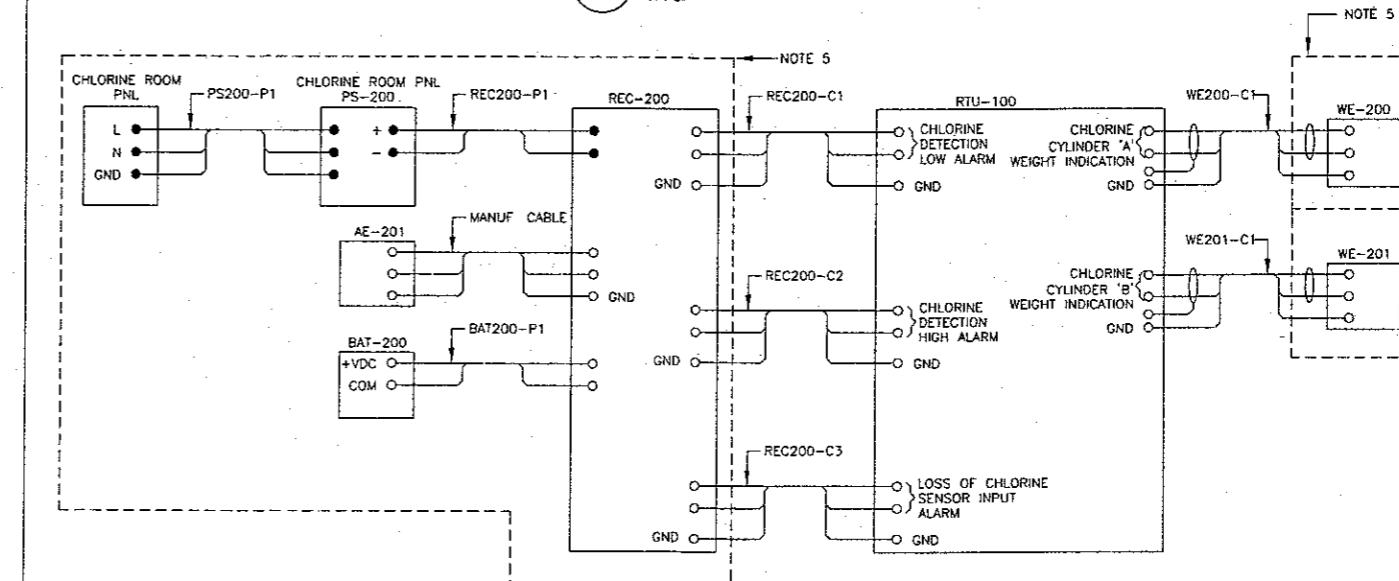
SHEET  
E006  
12 OF 20 SHEETS  
SCI PROJECT#  
18449.07.03  
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Las Vegas, Nevada 89119  
(702) 359-9395 Fax (702) 359-9783  
[www.stanleygroup.com](http://www.stanleygroup.com)

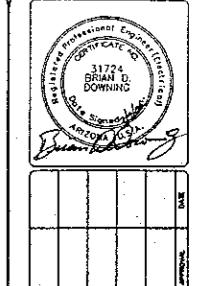
Engineering & Controls  
3550 N. Central Ave. Ste. 1900 Phoenix, AZ 85012  
BRIAN D. UPHAM  
ARIZONA STATE LICENSED ELECTRICAL ENGINEER  
#31774



Stanley Consultants Inc.  
DATE 3/7/2006

A CHLORINE BOOSTER PUMP SCHEMATIC  
NTSA1 CHLORINE BOOSTER PUMP CONNECTION DIAGRAM  
NTSB CHLORINATOR LEAK DETECTOR SCHEMATIC  
NTSB1 CHLORINATOR LEAK DETECTOR CONNECTION DIAGRAM  
NTS

CIRCUIT SCHEDULE	
CIRCUIT NO.	CONDUCTORS
STR200-C1	4 - #14, #14 GND
STR200-C2	2 - #14, #14 GND
STR200-C3	2 - #14, #14 GND
REC200-C1	2 - #14, #14 GND
REC200-C2	2 - #14, #14 GND
REC200-C3	2 - #14, #14 GND
REC200-P1	2 - #12, #12 GND
AE200-C1	1 - #14 GND
BAT200-P1	2 - #14, #14 GND
PS200-P1	2 - #12, #12 GND
WE200-C1	1 - #14 GND
WE201-C1	1 - #14 GND

C CIRCUIT SCHEDULE  
NTS

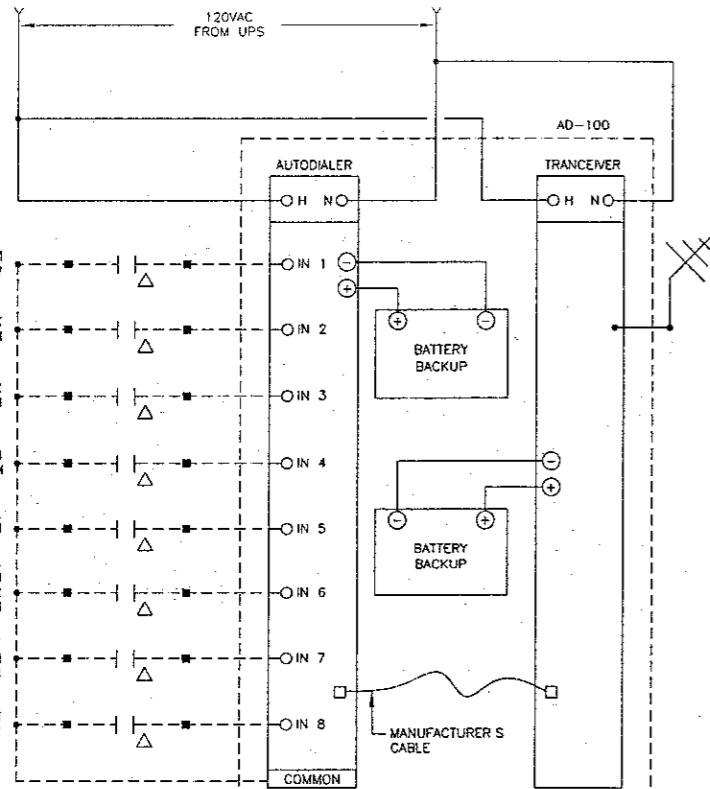
SCALE (H)	SOME
SCALE (V)	NONE
DRAWN BY	GAF
CHECKED BY	BBD
DATE	3/7/2006

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Las Vegas, Nevada 89119  
(702) 359-5315 Fax: (702) 359-5793  
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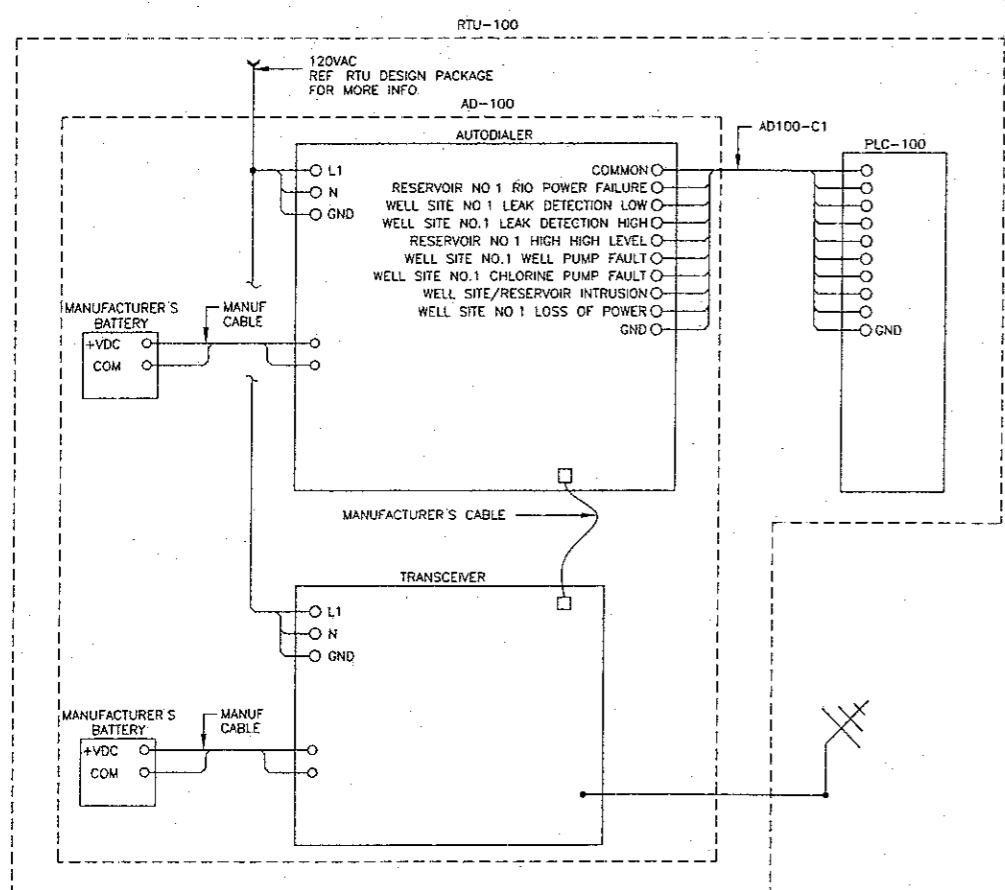


RHODES HOMES ARIZONA, LLC  
GOLDEN VALLEY RANCH WELL #1  
SCHEMATIC/CONNECTION DIAGRAM  
- SHEET 3  
ARIZONA  
MOHAVE COUNTY

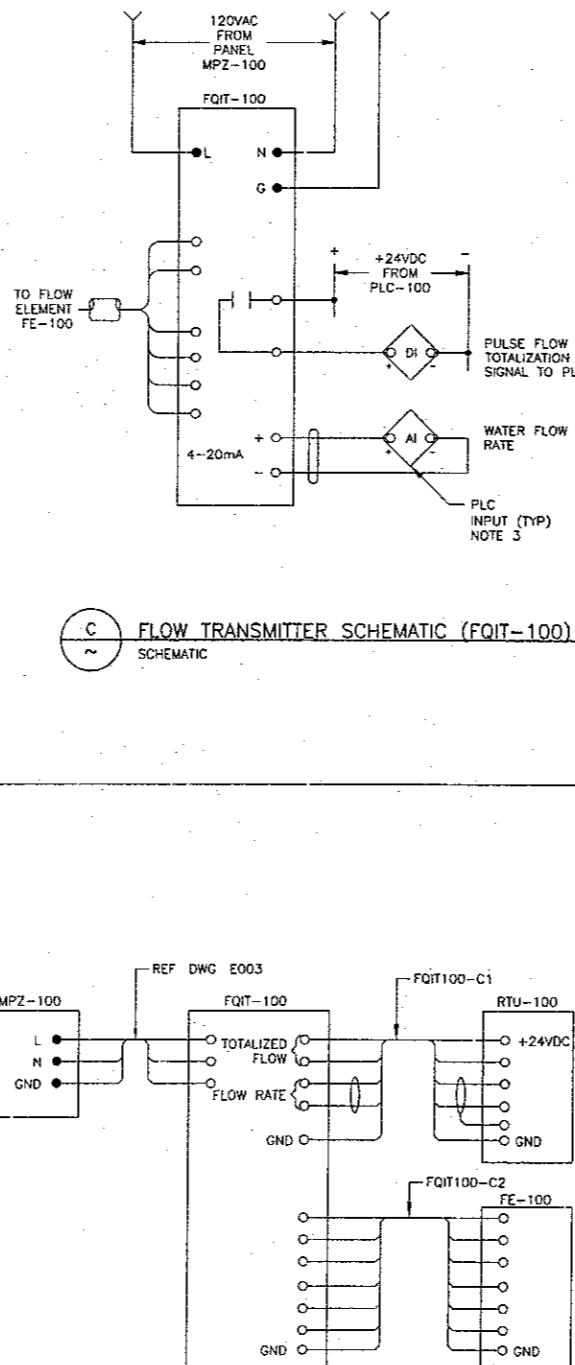
SHEET  
E007  
13 OF 20 SHEETS  
SCI PROJECT#  
18449.07.03  
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**B** AUTODIALER SCHEMATIC DIAGRAM  
~ SCHEMATIC



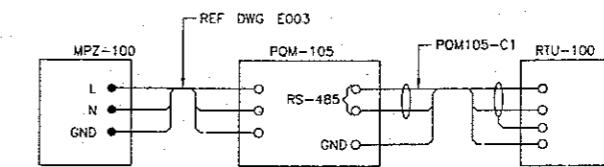
**B1 AUTODIALER CONNECTION DIAGRAM**



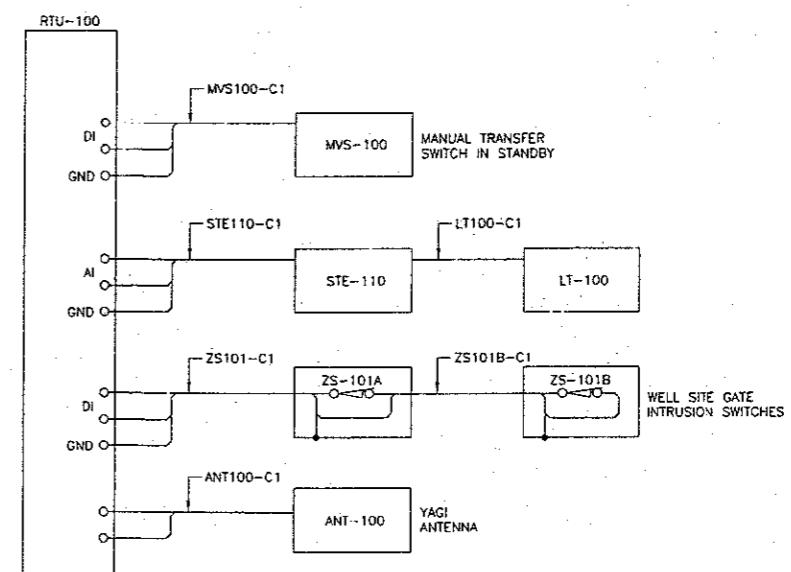
**C1 FLOW TRANSMITTER  
CONNECTION DIAGRAM (FQIT-100)**

## NOTES:

- 1 TYPICAL SCHEMATIC DIAGRAMS ARE INTENDED TO REFLECT THE GENERAL CONTROL STRATEGY. ACTUAL CIRCUITRY MAY VARY FOR SPECIFIC EQUIPMENT SUPPLIED. THE NUMBER AND TYPE OF DEVICES SHALL BE FURNISHED AS REQUIRED FOR PROPER OPERATION OF THE EQUIPMENT
- 2 CONTROL FUSES SHALL BE ADEQUATELY SIZED PER THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.
- 3 CONNECTIONS TO PLC INPUTS AND OUTPUTS ARE SHOWN IN A SIMPLIFIED MANNER. REFERENCE TYPICAL I/O CONNECTION DIAGRAMS IN RTU DESIGN PACKAGE FOR ADDITIONAL INFORMATION



**POWER QUALITY METER  
CONNECTION DIAGRAM (PQM-105)**



E MISCELLANEOUS CONNECTION DIAGRAM  
~ CONNECTION

CIRCUIT SCHEDULE	
CIRCUIT NO.	CONDUCTORS
AD100-C1	9 - #14, #14 GND
FQIT100-C1	2 - #14, 1 - IC, #14 GND
FQIT100-C2	1 - MC, #14 GND
FQCM105-C1	1 - IC, #14 GND
ZS101-C1	2 - #14, #14 GND
ZS101B-C1	2 - #14, #14 GND
MVS100-C1	2 - #14, #14 GND
STE110-C1	1 - IC, #14 GND
LT100-C1	1 - MC, #14 GND
ANT100-C1	ANT. CABLE

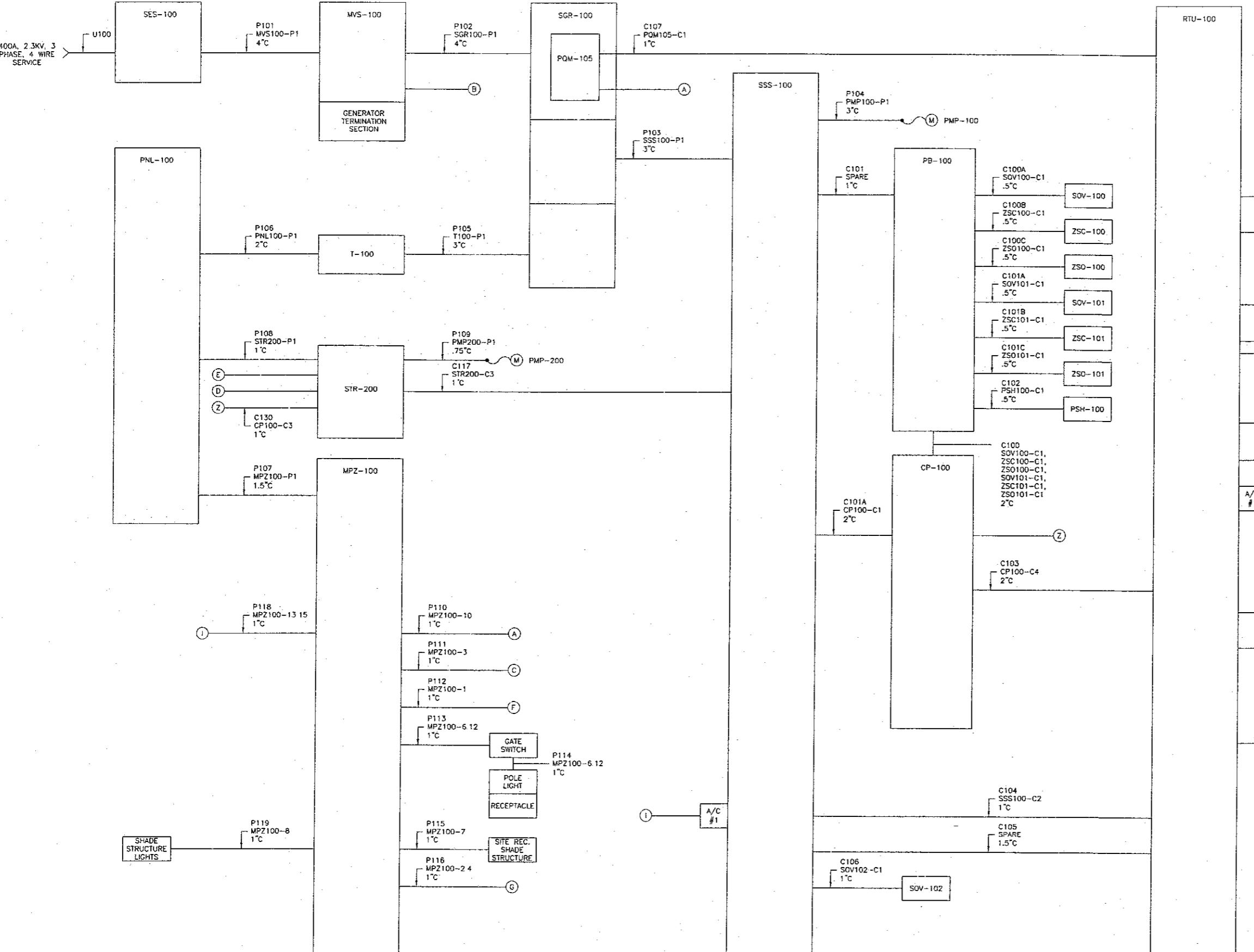
**CIRCUIT SCHEDULE**



**Stanley Consultants Inc.**

**GOLDEN VALLEY RANCH WELL #1  
SCHEMATIC/CONNECTION DIAGRAM**  
- SHEET 4

SHEET  
008  
20 SHEETS



3550 N. Central Ave. Ste. 1800 Phoenix, AZ 85012

卷之三

A circular library stamp with the text "STATE LIBRARY OF NEW SOUTH WALES" around the perimeter and "SYDNEY" in the center.

A circular red ink stamp. The outer ring contains the text "Arizona State Board of Education" at the top and "Office of the Superintendent of Public Instruction" at the bottom. The center of the stamp contains the date "April 19, 1903".

11724  
IRAN D.  
OWNING

Engineering

CHARGE  
DISCHARGE

卷之三

卷之三

A circular stamp with the following text:  
Registered Professional Engineers Board of Alberta  
APRIL 2004

SALE (H)	NONE		
SALE (V)	NONE		
FAWN BY GAF			
CHECKED BY BDD			
DATE	3/7/2006	RECEIVED	
INITIALS		STAMP NO.	
		GRADE	WT

50 | Page

100 N. Eastern Avenue, Suite 200  
Urgent, Inc., Portland 99101  
(503) 222-0368 Fax (503) 222-0356  
<http://www.urgentinc.com>

Stanley Cons  
lue  
[74] www.stanleycons.com

Sta  
ARIZONA

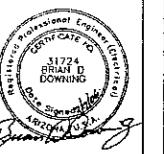
ARIZONA, LLC  
ANCH WELL  
K DIAGRAM

RODES HOMES AT  
BEN VALLEY R.  
CONDUIT BLOCK  
MFG. CO.

A rectangular label with a thin black border. The text "GOLD CC" is printed vertically along the left edge. The text "MCHAVE COUNT" is printed vertically along the right edge. At the bottom center, it says "SHEET" above the number "F009".

15 OF 20 SHEETS
SCI PROJECT # 18449.07.03





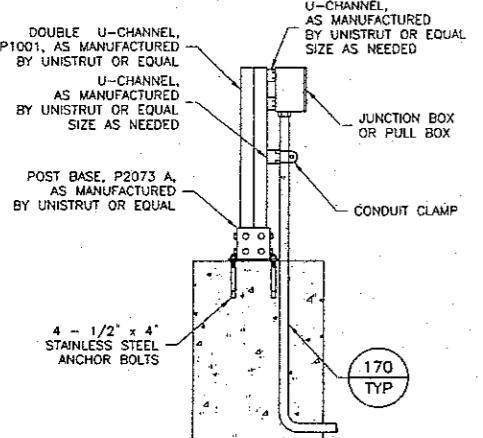
DLE Engineering  
3550 N. Central Ave. #200 Phoenix, AZ 85012



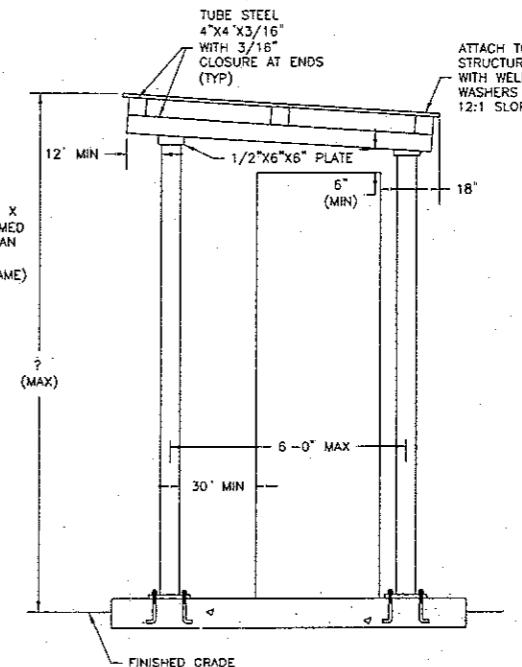
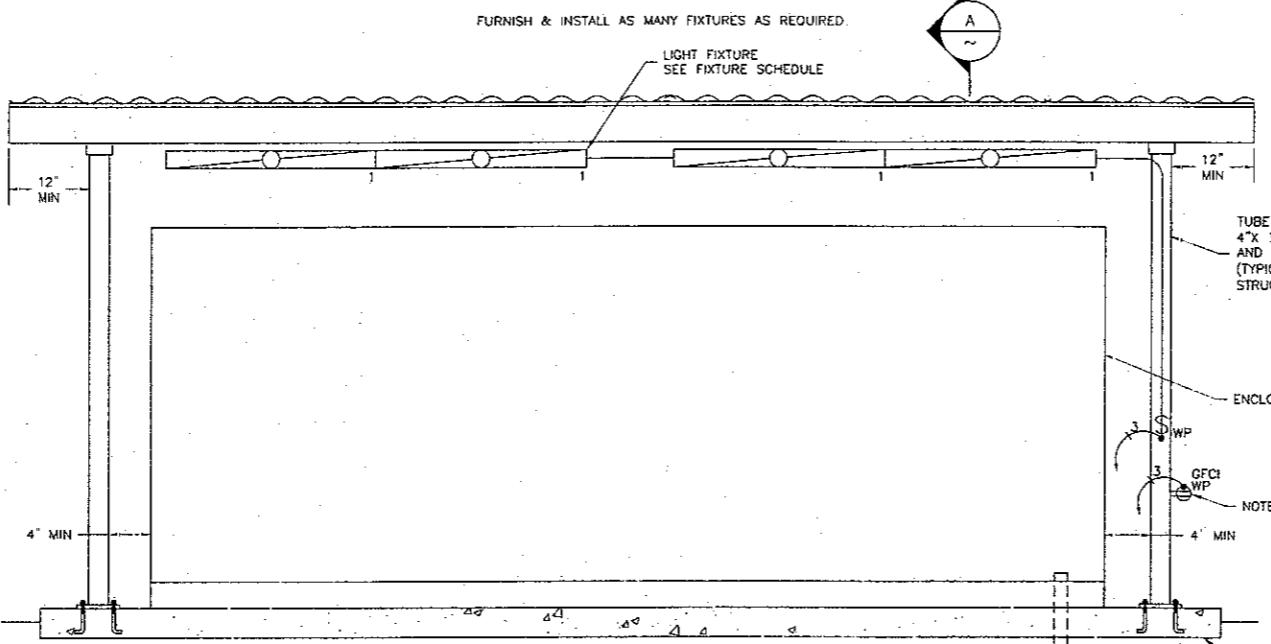
SEED S. Eastern Avenue, Suite 200  
Phoenix, Arizona 85016  
(701) 563-3395 Fax (701) 563-9793  
www.dlcgroup.com  
**Stanley Consultants INC.**

PHODES HOMES ARIZONA, LLC  
GOLDEN VALLEY RANCH WELL #1  
STANDARD DETAILS - SHEET 2  
MICHAEV COUNTY

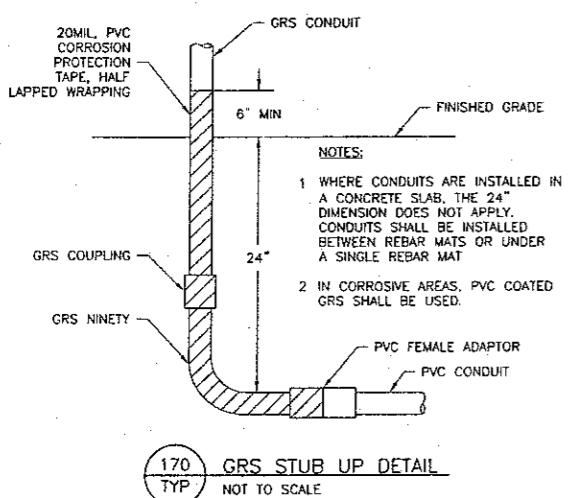
SHEET  
E011  
17 OF 20 SHEETS  
SCI PROJECT #  
18449.07.03  
90% PRELIMINARY  
NOT FOR  
CONSTRUCTION



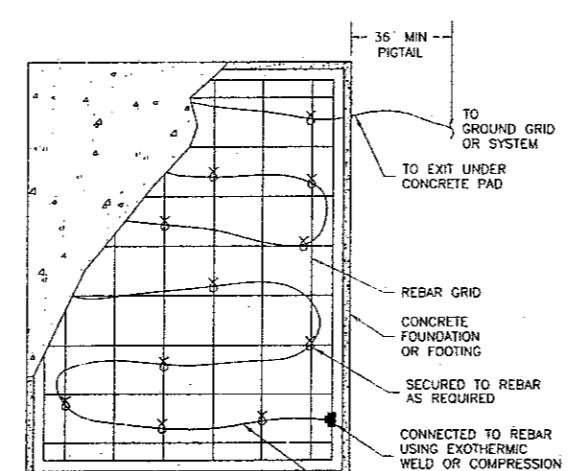
**202 JUNCTION BOX MOUNTING DETAIL**  
NOT TO SCALE



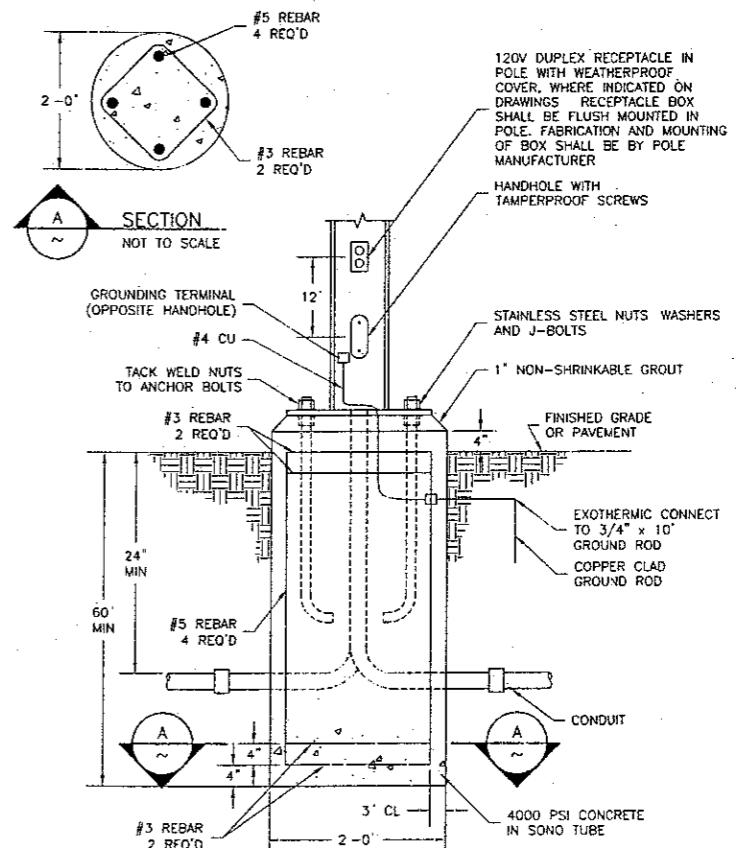
ATTACH TO  
STRUCTURE  
WITH WELD  
WASHERS  
12:1 SLOPE



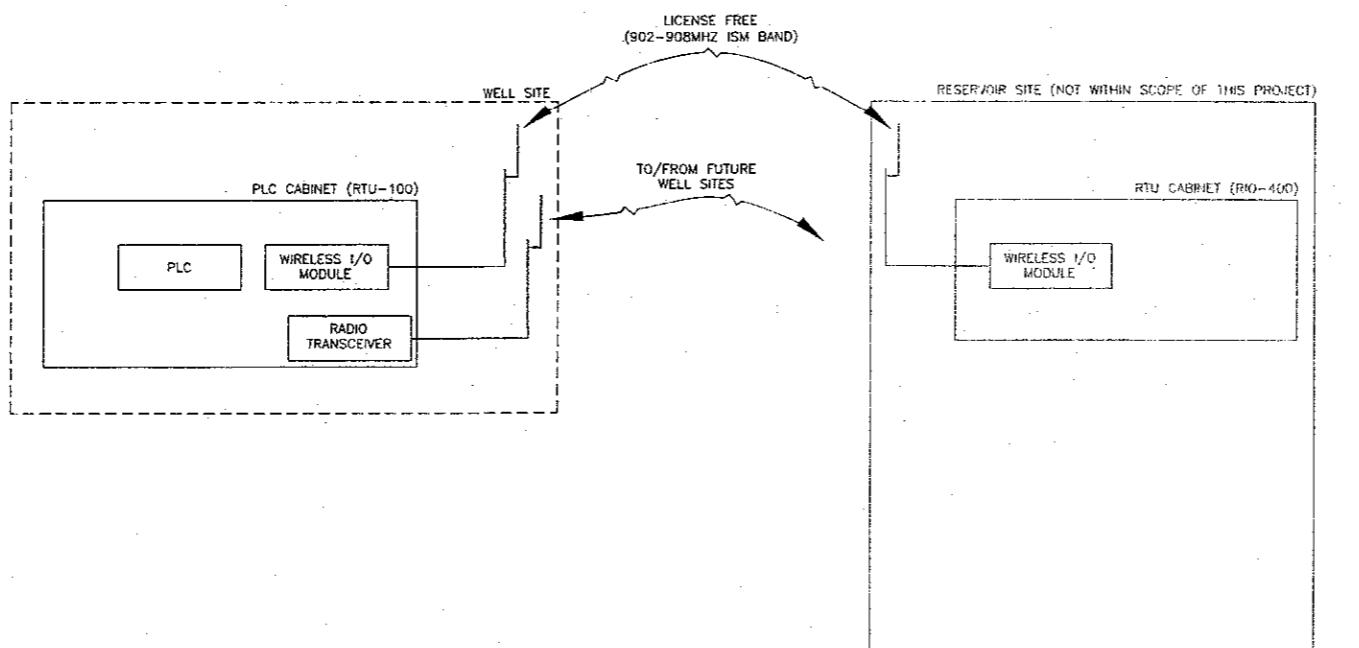
**170 GRS STUB UP DETAIL**  
NOT TO SCALE



**402 UFER® GROUNDING DETAIL**  
NOT TO SCALE



**501 AREA LIGHTING POLE MOUNTING SHORT BASE**  
NOT TO SCALE



(A) SYSTEM COMMUNICATIONS/TELEMETRY DIAGRAM

RHODES HOMES ARIZONA, LLC		5020 S. Eastern Avenue, Suite 200 Las Vegas, Nevada 89118 (702) 385-1396 Fax (702) 385-9793 <a href="http://www.stanleygroup.com">www.stanleygroup.com</a>
GOLDEN VALLEY RANCH WELL #1 SYSTEM COMMUNICATIONS ARCHITECTURE		
MARSHALL COUNTY, ARIZONA		
SHEET E012		90% PRELIMINARY NOT FOR CONSTRUCTION
18 OF 20 SHEETS		SCI PROJECT # 18449.07.03

D&L Engineering & Controls	
3550 N. Central Ave., Ste. 1800 Phoenix, AZ 85012	
CERTIFICATE NO. 31721 BRIAN DOMINGUE	
DATE ISSUED: 10/10/2006	
DRAWN BY:	APPROVED:
SUPERVISOR:	DATE:
REVIEWED BY:	DATE:
INITIALS:	INITIALS:



**Stanley Consultants INC.**

ISA INSTRUMENT IDENTIFICATION TABLE

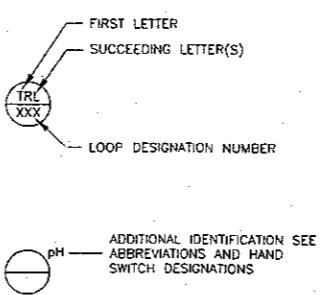
## P&ID ABBREVIATIONS

FIRST LETTERS		SUCCEEDING LETTERS		
MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A ANALYZER		ALARM		AUTO
B BURNER, COMBUSTION				
C CONDUCTIVITY			CONTROL	CLOSED
D DENSITY	DIFFERENTIAL			
E VOLTAGE		ELEMENT		
F FLOW	RATIO			
G GAUGE		GLASS, VIEWING DEVICE		
H HAND				HIGH
I CURRENT		INDICATE		
J POWER	SCAN			
K TIME SCHED.	TIME RATE OF CHANGE		CONTROL STATION	
L LEVEL		LIGHT		LOW
M MOTION				MIDDLE
N INTRUSION				NORMAL
O TORQUE		ORIFICE, RESTRICTION		OPEN
P PRESSURE		POINT CONNECTION		STOP
Q QUANTITY	INTEGRATE, TOTALIZE			
R RADIATION		RECORD, OR PRINT		RUN OR REMOTE
S SPEED, FREQUENCY	SAFETY		SWITCH	START
T TEMPERATURE			TRANSMIT	
U MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V VIBRATION			VALVE, LOUVER	
W WEIGHT		WELL		
X MOTOR	X-AXIS	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y EVENT, STATE, OR PRESENCE	Y-AXIS		RELAY, COMPUTE, CONVERT	
Z POSITION	Z-AXIS		DRIVER, ACTUATOR FINAL CONTROL ELEMENT	

A	AMPERE	JB	JUNCTION BOX
AFD	ADJUSTABLE FREQUENCY DRIVE	L, LO	LOW
AI	ANALOG INPUT	CAN	LOCAL AREA NETWORK
AIC	AMPS INTERRUPTING CAPACITY	LC	LOOP CONTROLLER
ARV	AIR RELIEF VALVE	LCP	LOCAL CONTROL PANEL
AO	ANALOG OUTPUT	LOS	LOCK-OFF-STOP
AS	AIR SUPPLY	LR	LOCAL/REMOTE
ATS	AUTOMATIC TRANSFER SWITCH	LS	LEVEL (i.e. FLOAT) SWITCH
AUTO	AUTOMATIC	M	MOTOR
CB	CIRCUIT BREAKER	MA	MATERIAL/AUTO
CDR	CHORNE	MC	MANUFACTURE CABLE
CON	CONTACTOR	MCC	MOTOR CONTROL CENTER
CU	COPPER	MCP	MOTOR CIRCUIT PROTECTOR
CV	CONTROL VALVE	MFR(S)	MANUFACTURER(S)
DCS	DISTRIBUTED CONTROL SYSTEM	MGD	MILLION GALLONS PER DAY
DI	DISCRETE INPUT	MGL	MILLIGRAMS PER LITER
DO	DISSOLVED OXYGEN, DISCRETE OUTPUT	MH	MANHOLE
DP	DIFFERENTIAL PRESSURE	MLR	MIXED LIQUOR RETURN
DWG	DRAWING	MO	MOISTURE
EGO	EMERGENCY GAS OFF	MOD	MODULATED
ETM	ELAPSED TIME METER	MTU	MASTER TELEMETRY UNIT
ETM1	ELAPSED TIME METER (FAST SPEED)	NPW	NON-POTABLE WATER
ETM2	ELAPSED TIME METER (SLOW SPEED)	NS	NITROGEN SUPPLY
EOL	ELECTRONIC OVERLOAD	NTU	TURBIDITY
EXIST	EXISTING	O/C	OPEN / CLOSE
FA	FOUL AIR	OCA	OPEN-CLOSE-AUTO
FC	FAIL CLOSED	OCR	OPEN-CLOSE-REMOTE
FE	FINAL EFFLUENT	OIT	OPERATOR INTERFACE TERMINAL
FR	FORWARD-REVERSE	OL	OVERLOAD
FS	FLOAT SWITCH	OO	ON/OFF (MAINTAINED)
FVNVR	FULL VOLTAGE NON-REVERSING	OCA	ON-OFF-AUTO
FW	FINISHED WATER	OOR	ON-OFF-REMOTE
GND	GROUND	OSC	OPEN-STOP-CLOSE
GAL	GALLONS	PAH	PRESSURE ALARM HIGH
GPD	GALLONS PER DAY	PER	PERMISSIVE
GPH	GALLONS PER HOUR	PLC	PROGRAMMABLE LOGIC CONTROLLER
GPM	GALLONS PER MINUTE	PNL	PANEL
H, HI	HIGH	PO	PULSE OUTPUT
H2S	HYDROGEN SULFIDE	POS	POSITION
HMI	HUMAN MACHINE INTERFACE	POT	POTENTIOMETER
HOA	HAND-OFF-AUTO	PPG	POUNDS PER GALLON
I	CURRENT	PPH	POUNDS PER HOUR
IO	INPUT/OUTPUT	PPM	PARTS PER MILLION
IOE	INTERNAL-OFF-EXTERNAL	PR	PAIR

PRES	PRESSURE
PS	PRESSURE SWITCH
PSI	POUNDS PER SQUARE INCH
PV	PROCESS VARIABLE
RAS	RETURN ACTIVATED SLUDGE
RAW	RAW WATER
REM	REMOTE
RFLX	REFLECTION FREQUENCY
RIO	REMOTE INPUT OUTPUT
RS	RAW SEWAGE
RSP	RAW SEWAGE PUMP
RST	RESET
RTD	RESISTANCE TEMPERATURE DETECTOR
RTU	REMOTE TELEMETRY UNIT
RUNI	RUN (FAST SPEED)
RUNS	RUN (SLOW SPEED)
RVC	RESERVOIR CONTROL VALVE CLOSED
RVO	RESERVOIR CONTROL VALVE OPEN
SB	SLUDGE BLANKET
SEQ	SERVICE ENTRANCE EQUIPMENT
SEL	SELECTION/ROUTE SECTION
SLC	SINGLE LOOP CONTROLLER
SLOS	START-LOCK-OFF-STOP
SO2	SULFUR DIOXIDE
SOV	SOLENOID OPERATED VALVE
SP	SET POINT
SPD	SPEED
SPR	SPARE
SS	START/STOP (MAINTAINED)
SSS	SOLID STATE STARTER (SOFT START)
STR	MOTOR STARTER
T/H	TEMPERATURE ALARM HIGH
T/M	TEMPERATURE AND/OR MOISTURE
TMP	TEMPERATURE
TS	TEMPERATURE SWITCH
TSS	TOTAL SUSPENDED SOLIDS
UG	UNDERGROUND
USD	UP/STOP/DOWN
V	VOLT
VFD	VARIABLE FREQUENCY DRIVE
VIS	VALVE INCOMPLETE SEQUENCE
W	WATER
WAS	WASTE ACTIVATED SLUDGE
WW	WASTEWATER
WVC	WASTE VALVE CLOSED
WVO	WASTE VALVE OPEN
XMTR	TRANSMITTER
ZS	POSITION (i.e. LIMIT) SWITCH

**TAG NUMBERS AND DESIGNATIONS**



#### HAND SWITCH DESIGNATIONS

ES EMERGENCY STOP  
 HOA HAND-OFF-AUTO  
 HOR HAND-OFF-REMOTE  
 HORA HAND-OFF-REMOTE-AUTO  
 JOA JOG-OFF-AUTO  
 LOR LOCAL-OFF-REMOTE  
 LR LOCAL-REMOTE  
 OC OPEN-CLOSE  
 OO ON-OFF  
 S/S START STOP PUSH BUTTONS

## LINE SYMBOLS

—	MAJOR PROCESS PIPING OR FLOW CHANNEL
—	EXISTING PROCESS PIPING
—	SECONDARY PROCESS PIPING
—	EXISTING SECONDARY PROCESS PIPING
—	MISCELLANEOUS PIPING
—	EXISTING PIPING AND EQUIPMENT
— — — —	FUTURE PIPING AND EQUIPMENT
— — — — →	ELECTRICAL SIGNAL
— L L L —	HYDRAULIC SIGNAL
V V V V —	PNEUMATIC SIGNAL
— → → →	ELECTRICAL DIRECTION ARROW
— — — — *	SIGNAL CONNECTION POINT
— — — — →	FLOW ARROW FOR PROCESS PIPING
— → I-3 / A	PROCESS OR SIGNAL LINE GOING TO ANOTHER SHEET (MATCH LETTERS)
→ I-2 / A —	PROCESS OR SIGNAL LINE FROM ANOTHER SHEET (MATCH LETTERS)
— — — — ↓ —	PROCESS LINES CROSSING (NOT CONNECTED)
— — — — O —	INTERNAL SYSTEM SIGNAL LINK (SOFTWARE OR DATA LINK)



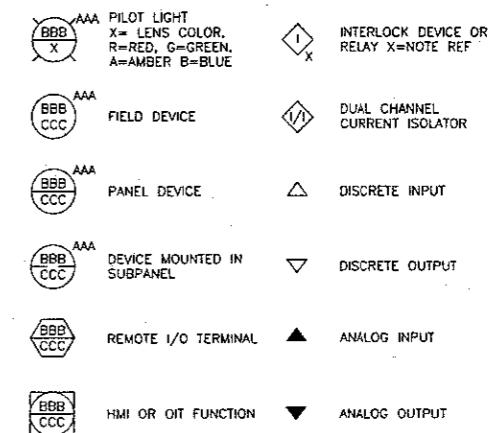
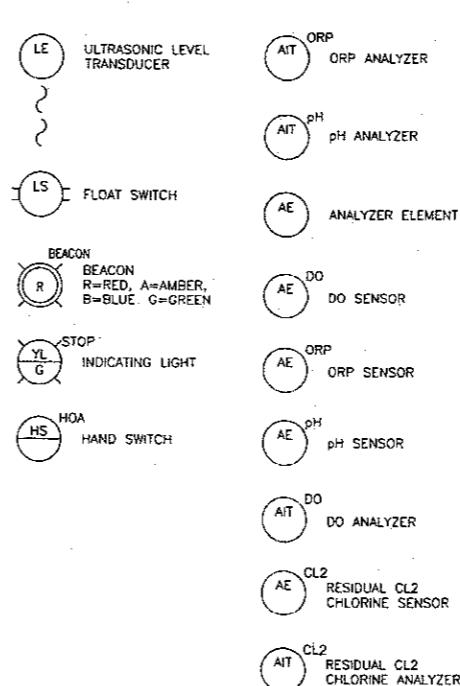
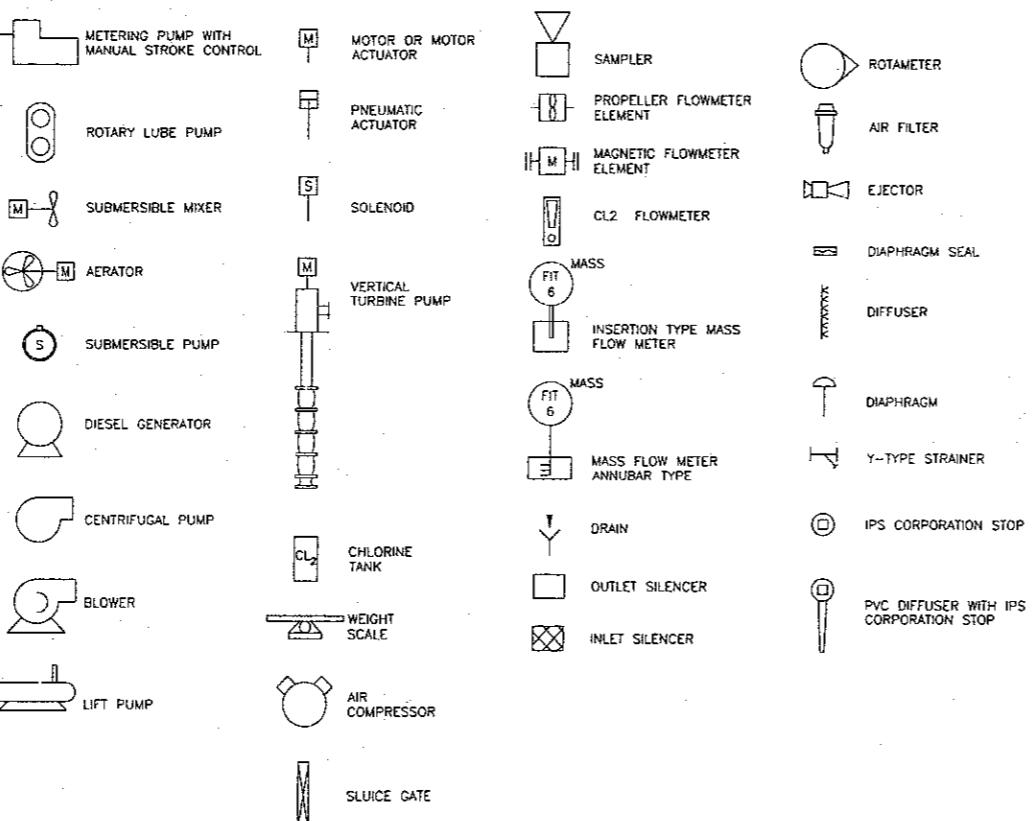
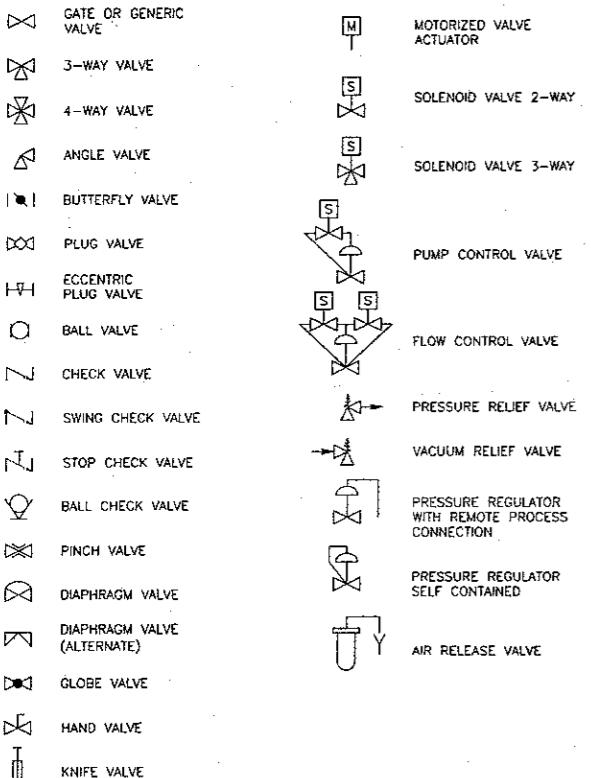
**DJL Engineering  
& Controls**  
3550 N. Central Ave., Ste. 1900 Phoenix, AZ 85012

## P&ID VALVE SYMBOLS

## P&ID EQUIPMENT AND PROCESS SYMBOLS

## SENSING, INDICATION AND CONTROL SYMBOLS

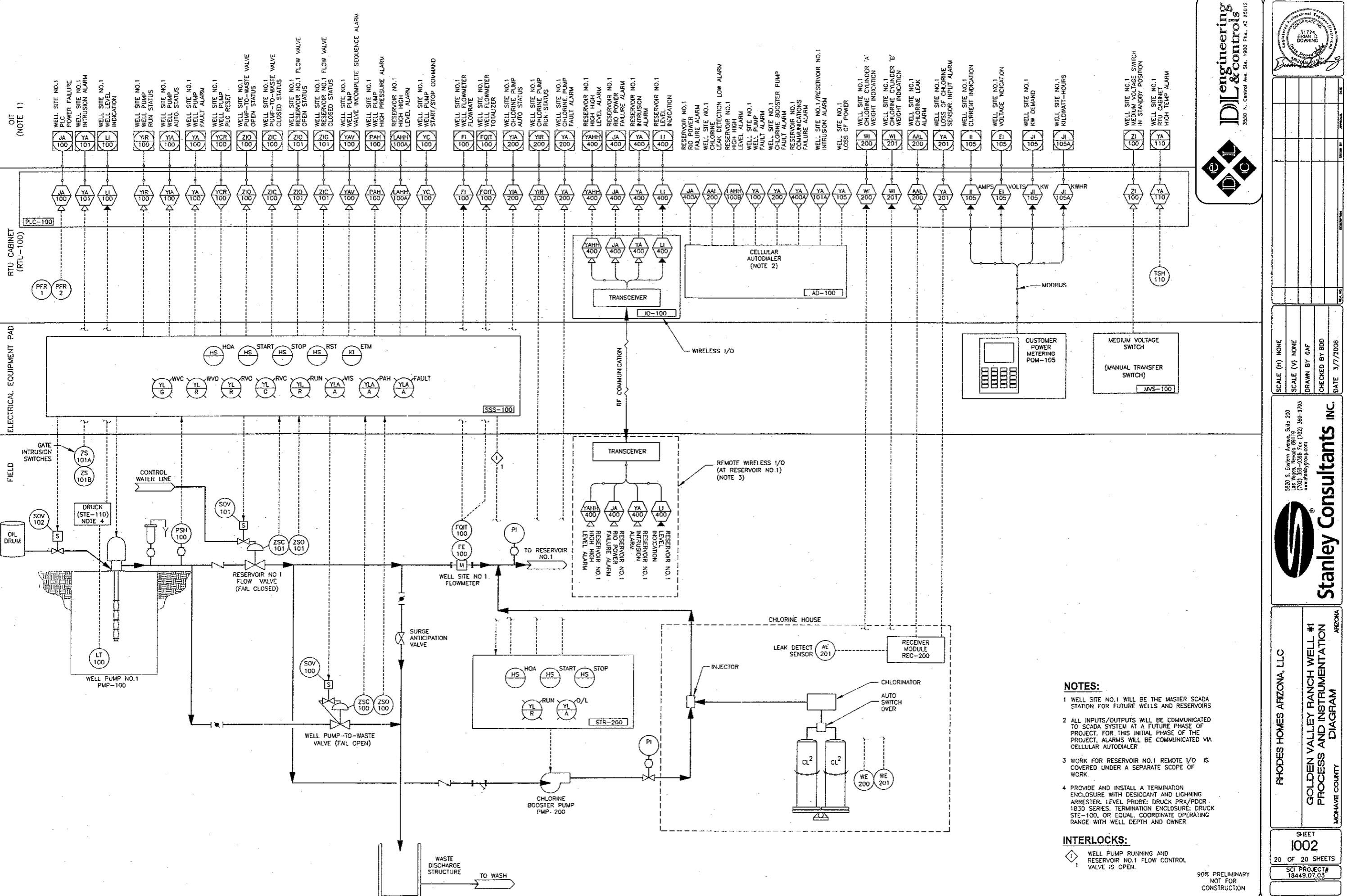
P&ID INTERFACE SYMBOLS



NOT

REFER TO ISA INSTRUMENT IDENTIFICATION TABLE FOR DEFINITION OF LETTERS BBB INSIDE THE BUBBLES. CCC REPRESENTS LOOP ID (IF USED) SEE ABBREVIATIONS LIST FOR SUPERSCRIPT AAA.

	<b>Stanley Consultants INC.</b>
5820 S. Eastern Avenue, Suite 200 Las Vegas, Nevada 89119 (702) 589-9396 Fax (702) 589-5793 <a href="http://www.stanleygroup.com">www.stanleygroup.com</a>	
RHODES HOMES ARIZONA, LLC	GOLDEN VALLEY RANCH WELL #1 P AND ID SYMBOLS AND LEGEND
ARIZONA	
MOHAVE COUNTY	
SHEET <b>1001</b>	
19 OF 20 SHEETS	
SCI PROJECT# 18449.07.03	



MOHAVE COUNTY, AZ.  
GOLDEN VALLEY RANCH  
WELL NO. 1

RTU DESIGN  
RTU-100

REVISIONS

REV.	BY	DATE	DESCRIPTION

GOLDEN VALLEY RANCH WELL #1  
RHODES HOMES ARIZONA, LLC  
MOHAVE COUNTY, AZ

COVER SHEET

DRAWN BY: GAF	PROJECT NO. 1175.00.101
DESIGNED BY: GAF	SUBMITAL DATE: MARCH 2006
CHECKED BY: EH	DRAWING NUMBER <b>EC01</b> SHEET 1 OF 15

DL engineering & controls  
3550 N. Central Ave., Ste. 1900 Phx., AZ 85012  
5820 S. Eastern Avenue, Suite 200  
Las Vegas, Nevada 89119  
(702) 369-9396 Fax (702) 369-9793  
[www.stanleygroup.com](http://www.stanleygroup.com)

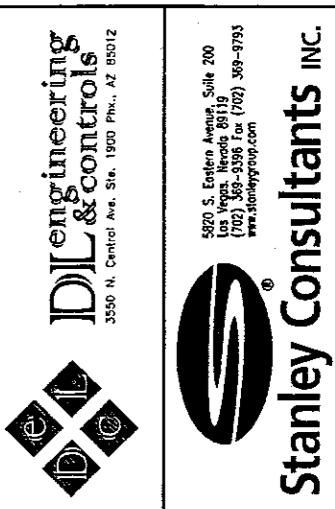
Stanley Consultants INC.

REGISTERED PROFESSIONAL ENGINEER (ELECTRICAL)  
CERTIFICATE NO. 31724  
BRIAN D. DOWNING  
3/16/06  
ARIZONA  
Signature

NOTES  
90%  
PRELIMINARY

MOHAVE COUNTY, AZ.  
 GOLDEN VALLEY RANCH WELL NO.1  
 RTU DESIGN  
 SHEET INDEX

SHEET	DRAWING TITLE
EC01	COVER SHEET
EC02	SHEET INDEX
EC03	ELECTRICAL SYMBOLS & ABBREVIATIONS
EC04	ISA TABLE AND COMMON LEGENDS SHEET
EC05	BILL OF MATERIALS
EC06	RTU ENCLOSURE LAYOUT
EC07	RTU PANEL LAYOUT
EC08	TERMINAL BLOCK & DEVICE DETAILS
EC09	COMMUNICATION SYSTEMS ARCHITECTURE
EC10	POWER DISTRIBUTION SCHEMATIC
EC11	SLOT 1 ANALOG INPUT SCHEMATIC
EC12	SLOT 2 ANALOG INPUT SCHEMATIC
EC13	SLOT 3 DISCRETE INPUT SCHEMATIC
EC14	SLOT 4 DISCRETE INPUT SCHEMATIC
EC15	SLOT 5 DISCRETE OUTPUT SCHEMATIC



NOTES  
 90%  
 PRELIMINARY

REVISIONS

REV.	BY	DATE	DESCRIPTION

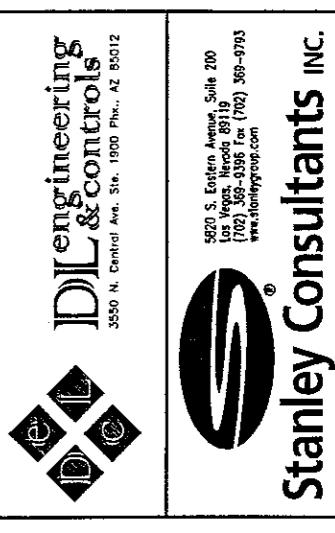
GOLDEN VALLEY RANCH WELL #1  
 RHODES HOMES ARIZONA, LLC  
 MOHAVE COUNTY, AZ

SHEET  
 INDEX

DRAWN BY: GAF	PROJECT NO. 1175.00.101
DESIGNED BY: GAF	SUBMITAL DATE: MARCH 2006
CHECKED BY: EH	DRAWING NUMBER <b>EC02</b>
	Sheet 2 of 15

MOHAVE COUNTY, AZ.  
GOLDEN VALLEY RANCH WELL NO.1  
RTU DESIGN  
ELECTRICAL SYMBOLS AND ABBREVIATIONS

SCHEMATIC/WIRING DIAGRAM SYMBOLS	SCHEMATIC/WIRING DIAGRAM SYMBOLS	ABBREVIATIONS																																																																																																																		
		CIRCUIT BREAKER *A - AMP RATING																																																																																																																		
		FUSE WITH PULLER *A - AMP RATING																																																																																																																		
		SWITCH NORMALLY OPEN																																																																																																																		
		TERMINAL BLOCK * - TB IDENTIFICATION																																																																																																																		
		TERMINAL BLOCK W/ FUSE PLUG AND FUSE * - TB IDENTIFICATION *A - AMPS																																																																																																																		
		TERMINAL BLOCK W/ DISCONNECT KNIFE * - TB IDENTIFICATION																																																																																																																		
		SURGE SUPPRESSOR FOR FLOATING SIGNAL CIRCUITS * - SS NUMBER IDENTIFICATION																																																																																																																		
		SURGE SUPPRESSOR FOR POWER SUPPLY * - SS NUMBER IDENTIFICATION																																																																																																																		
		CONTROL RELAY * - CR NUMBER IDENTIFICATION # - TERMINAL NUMBER																																																																																																																		
		EARTH GROUND																																																																																																																		
		TERMINAL BLOCK																																																																																																																		
		DUPLEX RECEPTACLE																																																																																																																		
		SINGLE RECEPTACLE																																																																																																																		
		DC POWER SUPPLY * - DC VOLTAGE RATING																																																																																																																		
		COLOR CODE CHART FOR 18 AWG BELDEN CABLES 12 COND. NO. 8466 AND 19 COND. NO. 8619																																																																																																																		
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GOLDEN VALLEY RANCH WELL #1  
RHODES HOMES ARIZONA, LLC  
MOHAVE COUNTY, AZ

DRAWN BY: GAF	PROJECT NO. 1175.00.101
DESIGNED BY: GAF	SUBMITTAL DATE: MARCH 2006
CHECKED BY: EH	DRAWING NUMBER EC03 SHEET 3 OF 15

MOHAVE COUNTY, AZ.  
GOLDEN VALLEY RANCH WELL NO.1  
RTU DESIGN  
ISA TABLE AND COMMON LEGENDS SHEET

ISA INSTRUMENT IDENTIFICATION TABLE

FIRST LETTERS		SUCCEEDING LETTERS		
MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A ANALYZER		ALARM		AUTO
B BURNER, COMBUSTION				
C CONDUCTIVITY			CONTROL	CLOSED
D DENSITY	DIFFERENTIAL			
E VOLTAGE		ELEMENT		
F FLOW	RATIO			
G GAUGE		GLASS, VIEWING DEVICE		
H HAND				HIGH
I CURRENT		INDICATE		
J POWER	SCAN			
K TIME, TIME SCHED.	TIME RATE OF CHANGE		CONTROL STATION	
L LEVEL		LIGHT		LOW
M MOTION				MIDDLE
N INTRUSION				NORMAL
O TORQUE		ORIFICE, RESTRICTION		OPEN
P PRESSURE		POINT CONNECTION		STOP
Q QUANTITY	INTEGRATE, TOTALIZE			
R RADIATION		RECORD, OR PRINT		REMOTE
S SPEED, FREQUENCY	SAFETY		SWITCH	START
T TEMPERATURE			TRANSMIT	
U MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V VIBRATION			VALVE, LOUVER	
W WEIGHT		WELL		
X MOTOR	X-AXIS	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y EVENT, STATE, OR PRESENCE	Y-AXIS		RELAY, COMPUTE, CONVERT	
Z POSITION	Z-AXIS		DRIVER, ACTUATOR, FINAL CONTROL ELEMENT	



NOTES  
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PRELIMINARY

REVISIONS			
REV.	BY	DATE	DESCRIPTION

GOLDEN VALLEY RANCH WELL #1  
RHODES HOMES ARIZONA, LLC  
MOHAVE COUNTY, AZ

PLOTTED: Mar 07, 2006 by GAF

8:35pm

DWG FILE: 1175.00.101\_ECO4.dwg

FIELD WIRES TAG LEGEND	PANEL POWER WIRES TAG LEGEND	PANEL I/O WIRES TAG LEGEND	COLOR CODE CHART FOR 22 AWG BELDEN PAIRED CABLE NO. 8761	PANEL WIRING IDENTIFICATION						
<p>DEVICE NAME/TBXX-00</p> <p>TERMINAL NO.</p> <p>TERMINAL STRIP NO.</p> <p>FIELD DEVICE TAG NO.</p>	<p>TBXX-03/TBXX-03</p> <p>TO TERMINAL NO.</p> <p>TO TERMINAL STRIP NO.</p> <p>FROM TERMINAL NO.</p> <p>FROM TERMINAL STRIP NO.</p>	<p>0:#.2/TBXX-03</p> <p>INPUT POINT NO.</p> <p>TERMINAL STRIP NO.</p> <p>CHANNEL #</p> <p>SLOT #</p> <p>O=OUTPUT I=INPUT</p>	<p>BLACK BLK</p> <p>CLEAR CLR</p> <p>1st</p> <p>2nd</p>	<p>BLACK - 120VAC LINE WHITE - 120VAC NEUTRAL GREEN - GROUND ORANGE - DC POSITIVE BLUE - DC COMMON</p> <p>ISA TABLE &amp; COMMON LEGENDS SHEET</p> <table border="1"> <tr> <td>DRAWN BY: GAF</td> <td>PROJECT NO. 1175.00.101</td> </tr> <tr> <td>DESIGNED BY: GAF</td> <td>SUBMITTAL DATE: MARCH 2006</td> </tr> <tr> <td>CHECKED BY: EH</td> <td>DRAWING NUMBER ECO4</td> </tr> </table>	DRAWN BY: GAF	PROJECT NO. 1175.00.101	DESIGNED BY: GAF	SUBMITTAL DATE: MARCH 2006	CHECKED BY: EH	DRAWING NUMBER ECO4
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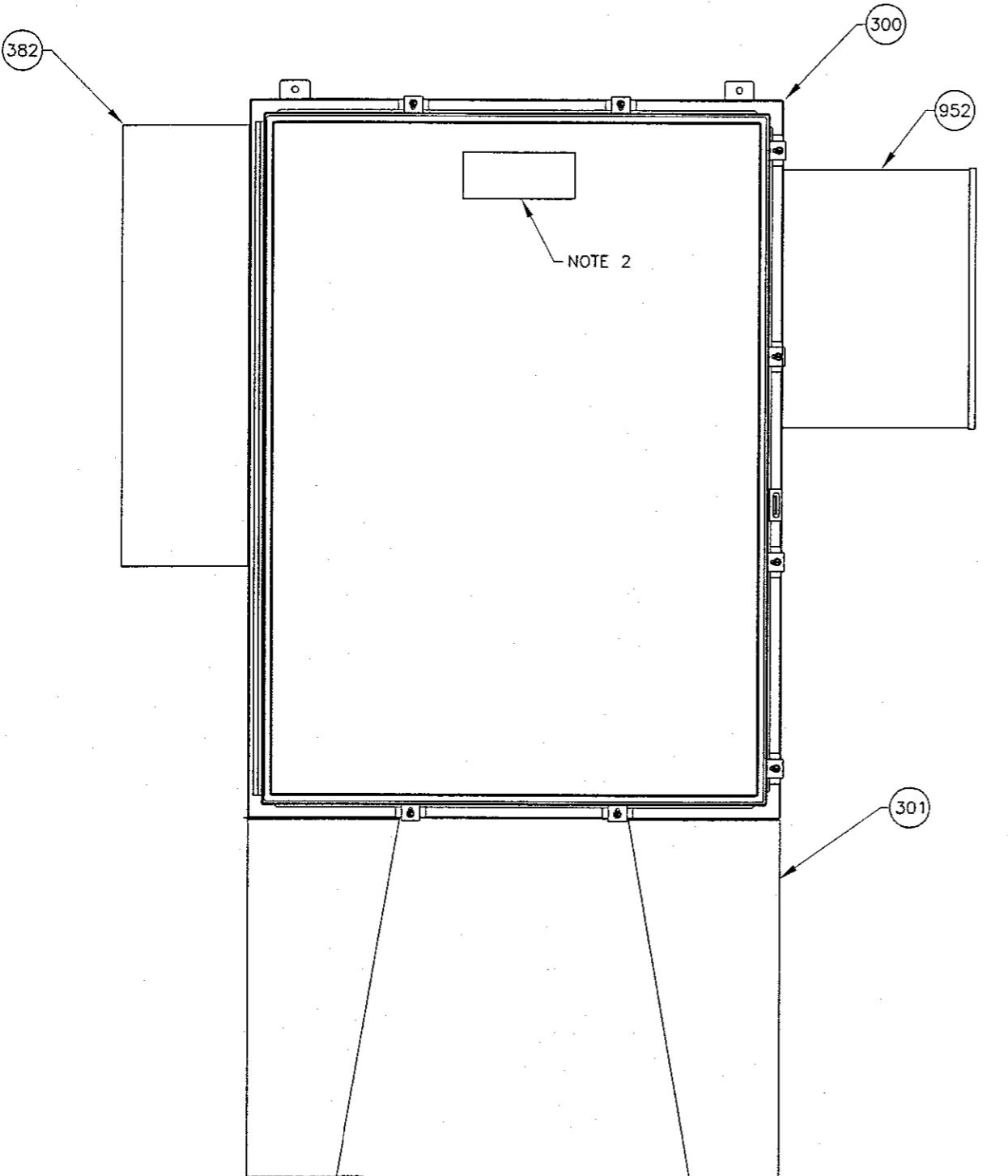
ITEM #	QTY	MANUFACTURER	CAT. NO.	DESCRIPTION
101	1	MODICON	E984-245	386 BASED COMPACT CONTROLLER W/ 512K MEMORY, 1-MODBUS PORTS, 1- MODBUS+ PORT
102	1	MODICON	AS-P120-125	POWER SUPPLY, COMPACT, 120 VAC INPUT VOLTAGE, 24VDC OUTPUT VOLTAGE, 1.5A@24VDC
103	1	MODICON	DTA-200	PROCESSOR AND 3-I/O SLOT BASE CHASSIS
104	1	MODICON	DTA-201	5-I/O SLOT BASE CHASSIS
110	2	MODICON	AS-BDEP-216	I/O MODULE, COMPACT, DC DIGITAL INPUT, 24VDC, 16-CH ISOLATED
112	1	MODICON	AS-BDAP216N	I/O MODULE, COMPACT, DC DIGITAL OUTPUT, 24VDC, 16-CH
115	2	MODICON	AS-BADU-206	I/O MODULE, COMPACT, DC ANALOG INPUT , 24VDC, 4-CH, 12 BIT
119	1	NIOBARA	CNOE-800	TSX COMPACT ETHERNET & SERIAL OPTION MODULE
172	1	MODICON	XBT-G5330	MAGELIS 10" HMI GRAPHIC COLOR TERMINAL W/ TOUCHSCREEN, ETHERNET/ IP COM. & RS-232 PORT
201	AR	ALLEN-BRADLEY	1492-DR6	TERMINAL MOUNTING RAIL, HI-RISE, ALUMINUM
202	20	ALLEN-BRADLEY	1492-EA35	END ANCHOR
210	8	ALLEN-BRADLEY	1492-GM35	TERMINAL BLOCK, GROUP MARKING CARRIER
211	10	PHOENIX CONTACT	3004142	FUSE BLOCK, UK5-HESI, SINGLE CIRCUIT, 250V, BFI LED
215	16	ALLEN-BRADLEY	1492-W4	TERMINAL BLOCK, SINGLE CIRCUIT, 600V, GRAY
219	69	ALLEN-BRADLEY	1492-WD4P	TERMINAL BLOCK, DOUBLE LEVEL W/ PLUGGABLE TOP LEVEL
221	3	ALLEN-BRADLEY	1492-WG4	TERMINAL BLOCK, SINGLE CIRCUIT, GROUNDING
222	13	ALLEN-BRADLEY	1492-FP4	FUSE PLUG FOR 1492-W4P PLUGGABLE TERMINAL BLOCKS
223	13	ALLEN-BRADLEY	1492-FP424	FUSE PLUG INSERT W/ BFI, 10-57VAC/DC WORKING VOLTAGE, 10A MAX @ 250V. PROVIDE FAST BLOW FUSES PER WIRING DIAGRAMS.
225	56	ALLEN-BRADLEY	1492-DP4	DISCONNECT PLUG FOR 1492-WD4P AND 1492-W4P
232	6	ALLEN-BRADLEY	1492-CB1G5	CIRCUIT BREAKER, 5A
234	1	ALLEN-BRADLEY	1492-CB1G15	CIRCUIT BREAKER, 15A
235	1	ALLEN-BRADLEY	1492-CB1G20	CIRCUIT BREAKER, 20A
300	1	HOFFMAN	A48H36FLP	ENCLOSURE, NEMA 3R, SINGLE DOOR, (48"H X 36"W X 16"D), WHITE INTERIOR AND EXTERIOR
301	1	HOFFMAN	AFK2416	ENCLOSURE STAND, FLOOR MOUNT 24" HEIGHT
302	1	HOFFMAN	A-NADFK	SWING PANEL KIT
303	1	HOFFMAN	A-48P36	SUBPANEL, WHITE, (48"H x 36"W)
304	1	HOFFMAN	ALF16D18R	18" CABINET FLOURESCENT STRIP LIGHT W/ DOOR SWITCH
305	1	HOFFMAN	A-36P30	SWING OUT SUBPANEL (27" X 33")
377	1	ANY	ANY	GROUNDING BAR
380	AR	PANDUIT	F2X4LG6 C2LG6	2 X 4 PLASTIC WIRING DUCT TYPE "E" W/COVER STYLE "C"
382	1	PROAIR	CR23-0216-G002	PANEL MOUNTED AIR CONDITIONER, NEMA 3R, 115 VAC, 1400/1600 BTU, 4.5A, COLOR MATCH TO CABINET
398	2	ANY	ANY	SIMPLEX RECEPTACLE, WHITE, 125V/15A, W/BOX AND BRUSHED ALUMINUM COVER
399	1	ANY	ANY	DUPLEX RECEPTACLE, WHITE, 125A/15A, W/BOX AND BRUSHED ALUMINUM COVER
405	1	IDEC	PS5R-SF24	POWER SUPPLY, 24VDC, 120W
408	1	IDEC	RH2B-UL-AC120V	RELAY, 120VAC COIL, DPDT
410	1	IDEC	RH2B-UL-DC24V	RELAY, 24VDC COIL, DPDT W/ INDICATOR LIGHT
421	2	IDEC	SH2B-05C	RELAY SOCKET, DIN RAIL MOUNT, FINGERSAFE
422	16	PHOENIX CONTACT	ST-REL 2-KG 24/1	RELAY, 24VDC COIL, SPST MINI RELAYS
423	16	PHOENIX CONTACT	URELG 2	RELAY SOCKET, DIN RAIL MOUNT, FINGERSAFE FOR MINI RELAYS
450	1	MTL SURGE	MA15/D1/SI	120/240 VAC, 15A, SURGE SUPPRESSOR AND FILTER
451	8	PHOENIX CONTACT	TT-2-PE-24VDC	SURGE SUPPRESSOR, 24VDC, 2 WIRE LOOP PROTECTION
703	1	POWERWARE	PW5115750	UPS, 120 VAC, 750 VA
802	AR	ANY	ANY	COMMUNICATION CABLE (CAT 5 ETHERNET)
853	2	TIMES MICROWAVE	EZ-900-NMC	N-MALE CONNECTOR
854	1	TIMES MICROWAVE	GK-S900T	ANTENNA LEAD GROUNDING KIT FOR LMR-900
855	1	PHOENIX CONTACT	LMR-400	ANTENNA CABLE, 50 OHM COAXIAL, WATERTIGHT (REQUIRES ADAPTER TO CONNECT TO MODULE)
900	1	POLYPHASER	IS-50NX-C2	BROADBAND COAXIAL SURGE PROTECTOR, BULKHEAD MOUNT
951	1	PHOENIX CONTACT	2867351	ANTENNA, 7 ELEMENT YAGI, 9db GAIN, W/ TYPE N(F) CONNECTOR (REQUIRES CABLE ADAPTER)
952	1	RACO	CELLULARM	VERBATIM, W/ CELLULAR AUTODIALER, VOICE OVER NETWORK ALARM SYSTEM, 32 CHANNEL, NEMA 4X ENCLOSURE INCLUDED.
953	1	HOFFMAN	ATEMNO	RTU ENCLOSURE TEMPERATURE SWITCH
954	1	PHOENIX CONTACT	RAD-ISM-900-SET-BD	TWO WAY TRANSCEIVER SET, 1: 4-20mA AI, 1: 4-20mA AO, 2: DI, 3: DO
955	1	PHOENIX CONTACT	RAD-OUT-8D-REL	8 OUTPUT CHANNEL EXPANSION MODULE

Plotted: Mar 07, 2006 gtron

DWG FILE: 1175.00.101-EC05.dwg

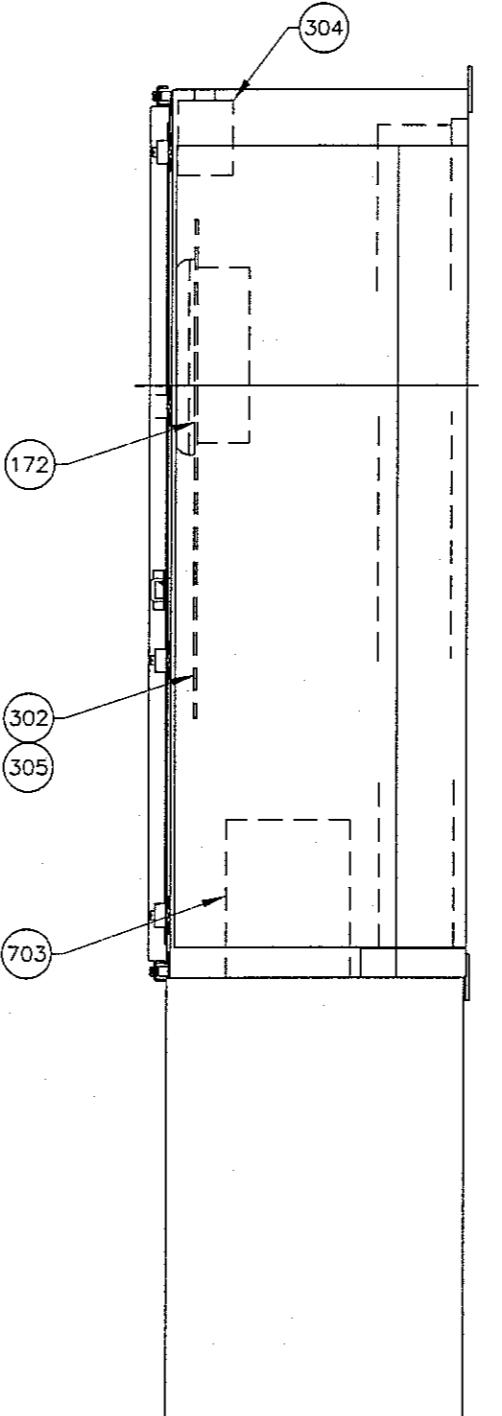
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<b>DI Engineering &amp; Controls INC.</b>		<b>Stanley Consultants INC.</b>																					
 		1870 S. Eastern Avenue, Suite 200 Phoenix, AZ 85016 (602) 955-9793 <a href="http://www.dienge.com">www.dienge.com</a>																					
 <p>REGISTERED PROFESSIONAL ENGINEER (ELECTRICAL)            CERTIFICATE NO. 31724            BRIAN D. DOWNING            DATE SIGNATURE APR 17, 2006  </p>																							
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SHEET 5 OF 15																							



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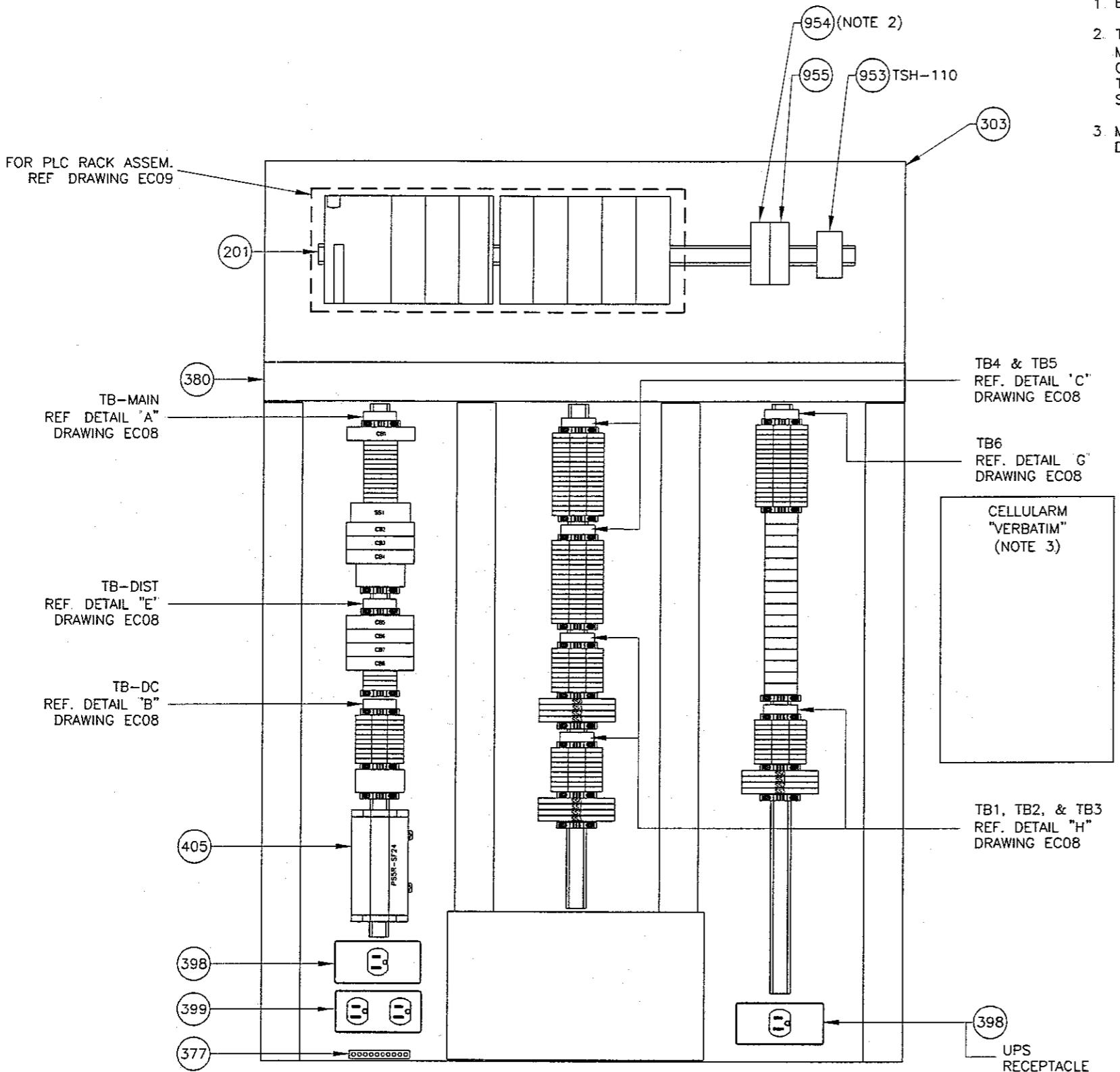
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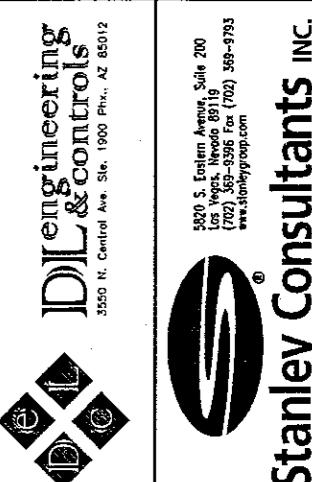
**NOTES:**

1. BILL OF MATERIALS IS ON DRAWING EC05
2. COORDINATE NAMEPLATES WITH THE OWNER

<b>DL Engineering &amp; Controls</b> 3550 N. Central Ave., Ste. 1900 Phoenix, AZ 85012 5820 S. Eastern Avenue, Suite 200 Las Vegas, Nevada 89119 369-9386 Fax (702) 369-9393 <a href="http://www.stanleygroup.com">www.stanleygroup.com</a>	<b>Stanley Consultants INC.</b> 																								
																									
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SHEET 6 OF 15																									

**NOTES:**

1. BILL OF MATERIALS IS ON DRAWING EC05
2. THE TRANSCEIVER MODULES COME AS A SET PROVIDE SISTER MODULE TO THE RESERVOIR #1 SITE RIO-400 FOR SYSTEM COMMUNICATIONS. COORDINATE THE RADIO LINK AS REQUIRED, WITH THE RESERVOIR RIO-400 CONTRACTOR TO INSURE A COMPLETE SYSTEM.
3. MOUNT CELLULARM ENCLOSURE TO SIDE OF RTU CABINET, REFER TO DWG EC06. USE CHASE NIPPLES FOR CIRCUIT RACEWAYS.

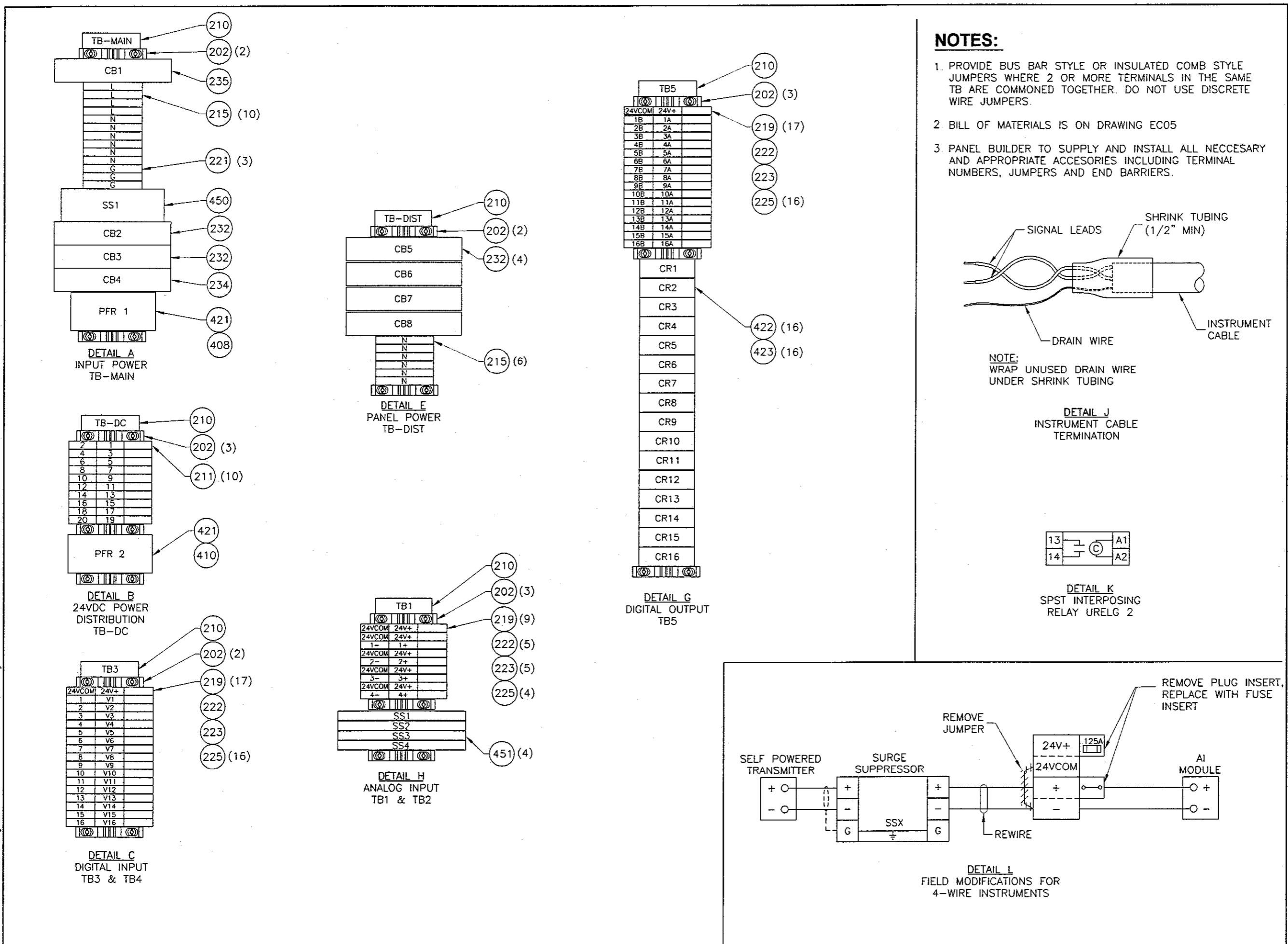


NOTES  
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REVISIONS			
REV.	BY	DATE	DESCRIPTION

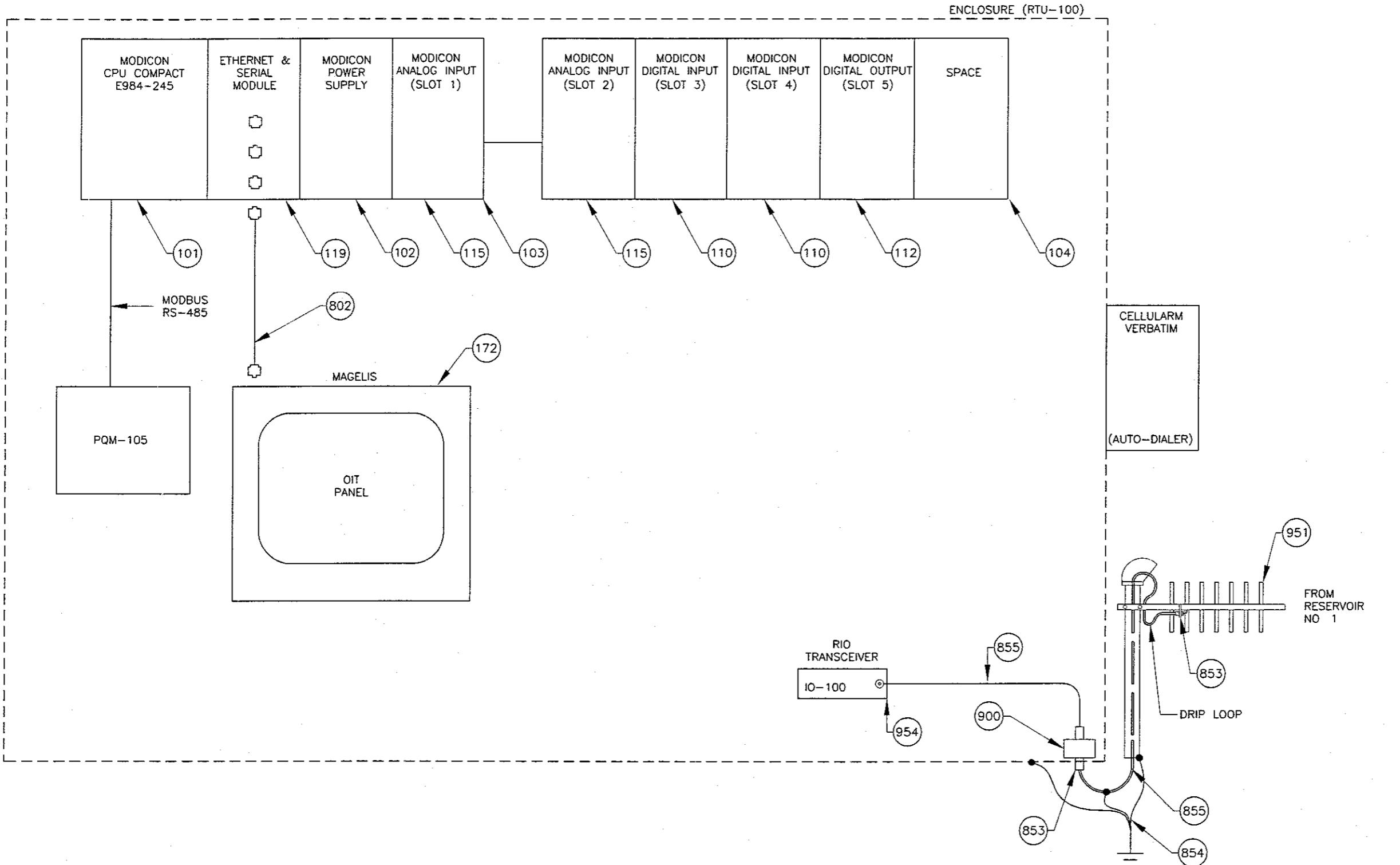
GOLDEN VALLEY RANCH WELL #1  
RHODES HOMES ARIZONA, LLC  
MOHAVE COUNTY, AZ

DRAWN BY: GAF	PROJECT NO. 1175.00.101
DESIGNED BY: GAF	SUBMITTAL DATE: MARCH 2006
CHECKED BY: EH	DRAWING NUMBER EC07
SHEET 7 OF 15	



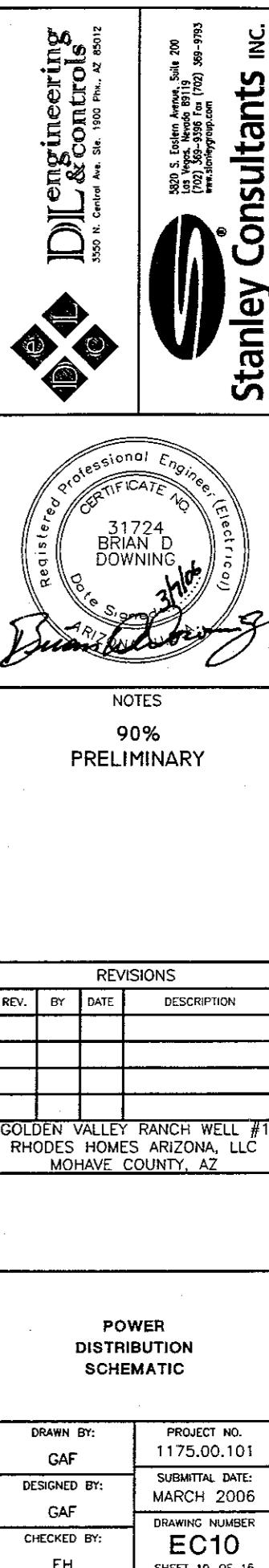
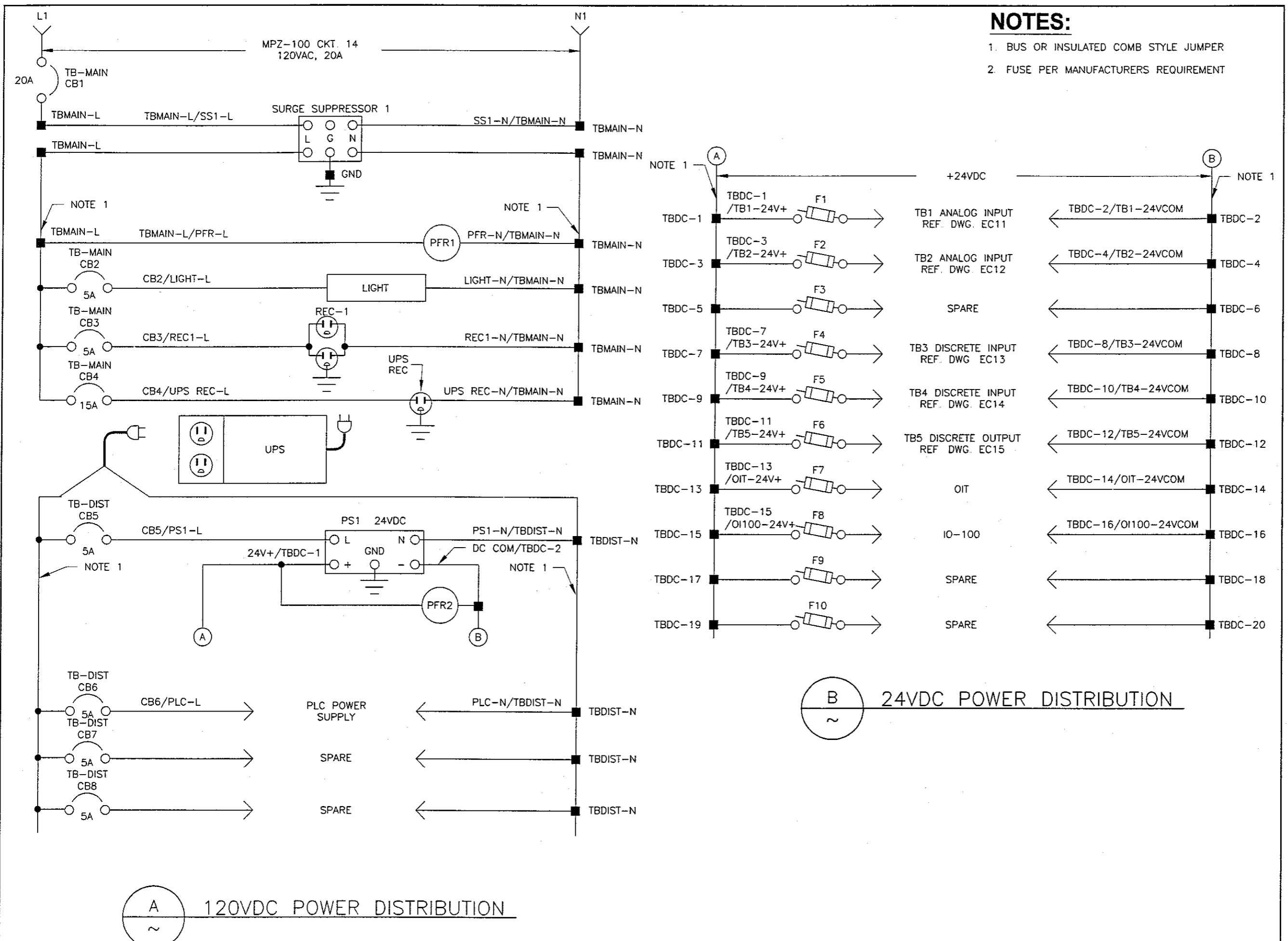
**NOTES:**

1 BILL OF MATERIALS IS ON DRAWING EC05



<b>DLL Engineering &amp; Controls INC.</b>	5820 S. Eastern Avenue, Suite 200 3550 N. Central Ave., Ste. 1900 Phoenix, AZ 85012 (602) 955-8119 Fax: (602) 955-9793 <a href="http://www.dllgroup.com">www.dllgroup.com</a>																				
<b>NOTES</b> 90% PRELIMINARY																					
<b>REVISIONS</b> <table border="1"> <thead> <tr> <th>REV.</th> <th>BY</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td></tr> </tbody> </table>		REV.	BY	DATE	DESCRIPTION																
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GOLDEN VALLEY RANCH WELL #1 RHODES HOMES ARIZONA, LLC MOHAVE COUNTY, AZ																					
<b>COMMUNICATIONS SYSTEMS ARCHITECTURE</b>																					
DRAWN BY: GAF	PROJECT NO. 1175.00.101																				
DESIGNED BY: GAF	SUBMITTAL DATE: MARCH 2006																				
CHECKED BY: EH	DRAWING NUMBER <b>EC09</b>																				

SHEET 9 OF 15

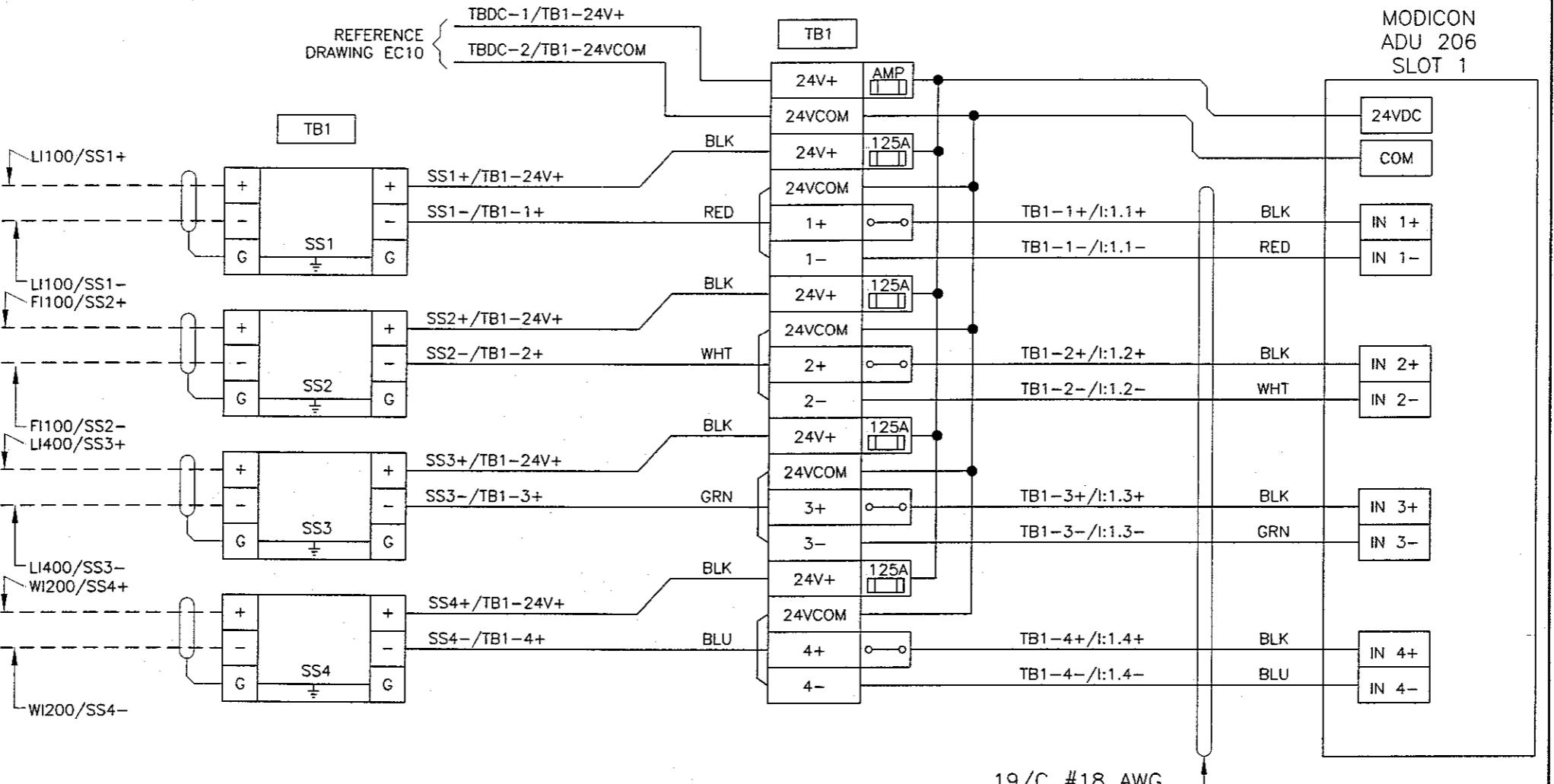


**NOTES:**

- WIRE MODULES PER MANUFACTURER'S REQUIREMENTS.

**DESCRIPTION**WELL SITE NO.1  
WELL LEVEL  
INDICATION**TAG NAME**

LI-100



PLOTTED: Mar 07, 2006 gtron

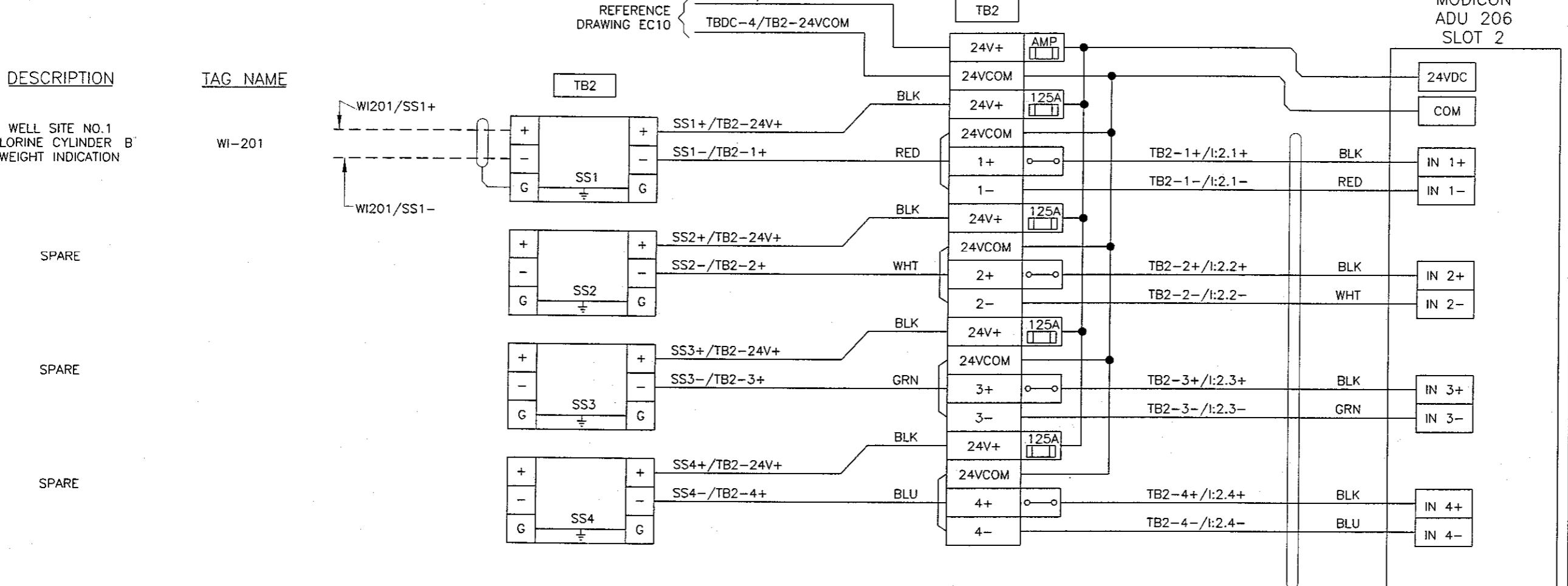
8:37am

DWG FILE: 1175.00.101-EC11.dwg

<b>DIL Engineering &amp; Controls INC.</b>	520 S. Euclid Avenue, Suite 200 Phoenix, Arizona 85012 (702) 563-5305 Fax (702) 569-9793 <a href="http://www.dilegroup.com">www.dilegroup.com</a>																				
<b>Stanley Consultants INC.</b>	520 N. Central Ave., Ste. 1900 Phoenix, AZ 85012 Los Angeles, Mexico 85219 (702) 563-5305 Fax (702) 569-9793 <a href="http://www.stanleygroup.com">www.stanleygroup.com</a>																				
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GOLDEN VALLEY RANCH WELL #1 RHODES HOMES ARIZONA, LLC MOHAVE COUNTY, AZ																					
<b>SLOT 1 ANALOG INPUT SCHEMATIC</b>																					
DRAWN BY: GAF PROJECT NO. 1175.00.101 DESIGNED BY: GAF SUBMITTAL DATE: MARCH 2006 CHECKED BY: EH DRAWING NUMBER EC11 SHEET 11 OF 15																					

**NOTES:**

1. WIRE MODULES PER MANUFACTURER'S REQUIREMENTS.



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3550 N. Central Ave. Ste. 1900 Phoenix, AZ 85012  
Las Vegas, Nevada 89119  
(702) 359-3596 Fax (702) 359-9781  
[www.dilegroup.com](http://www.dilegroup.com)

**Stanley Consultants INC.**

5820 S. Eastern Avenue, Suite 200  
Las Vegas, Nevada 89119  
(702) 359-3596 Fax (702) 359-9781  
[www.stanleygroup.com](http://www.stanleygroup.com)

**CERTIFICATE NO.**  
31724  
**BRIAN D. DOWNING**  
*[Signature]*

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GOLDEN VALLEY RANCH WELL #1  
RHODES HOMES ARIZONA, LLC  
MOHAVE COUNTY, AZ

**SLOT 2 ANALOG INPUT SCHEMATIC**

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DESIGNED BY: GAF	SUBMITTAL DATE: MARCH 2006
CHECKED BY: EH	DRAWING NUMBER EC12

SHEET 12 OF 15

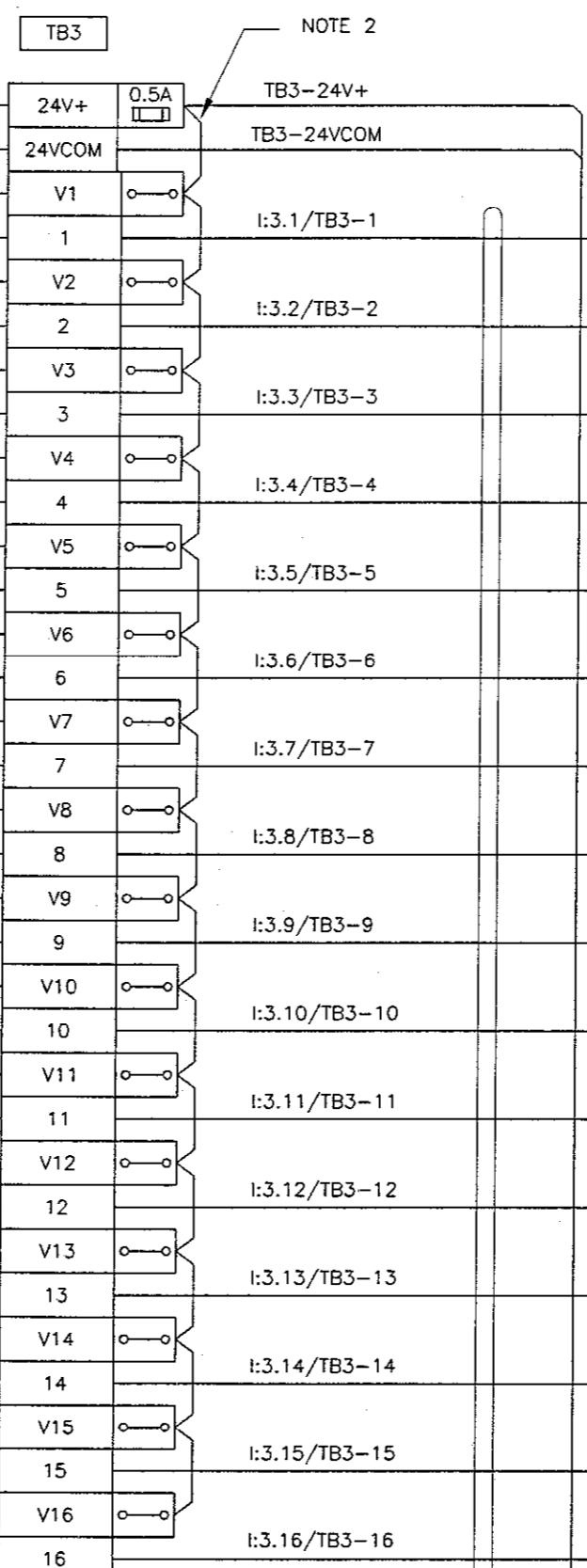
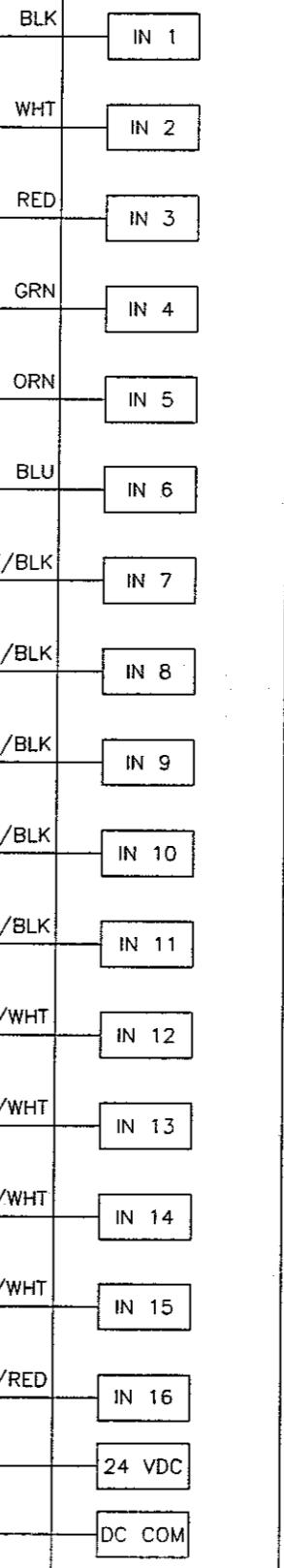
**NOTES:**

- 1 WIRE MODULES PER MANUFACTURER'S REQUIREMENTS.
2. BUS OR INSULATED COMB STYLE JUMPER

DESCRIPTIONWELL SITE NO.1  
INTRUSION ALARMWELL SITE NO.1  
RTU CABINET  
HIGH TEMP ALARMWELL SITE NO.1  
PLC  
POWER FAILUREWELL SITE NO.1  
MEDIUM VOLTAGE SWITCH  
IN STANDBY POSITIONWELL SITE NO.1  
CHLORINE DETECTION  
LOW ALARMWELL SITE NO.1  
CHLORINE DETECTION  
HIGH ALARMWELL SITE NO.1  
LOSS OF CHLORINE  
SENSOR INPUT ALARMWELL SITE NO.1  
CHLORINE PUMP  
AUTO STATUSWELL SITE NO.1  
CHLORINE PUMP  
RUN STATUSWELL SITE NO.1  
CHLORINE PUMP  
FAULT ALARMRESERVOIR NO.1  
HIGH HIGH  
LEVEL ALARMRESERVOIR NO.1  
RIO POWER  
FAILURE ALARMRESERVOIR NO.1  
INTRUSION  
ALARMWELL SITE NO.1  
WELL FLOWMETER  
TOTALIZER

SPARE

SPARE

REFERENCE  
DRAWING EC10TBDC-7/TB3-24V+  
TBDC-8/TB3-24VCOM19/C #18 AWG  
BELDEN 8619 OR EQUALMODICON  
DEP-216  
SLOT 3DII engineering  
& controls INC.5820 S. Eastern Avenue, Suite 200  
Las Vegas, Nevada 89118  
(702) 569-9793  
[www.diiengineeringgroup.com](http://www.diiengineeringgroup.com)

Stanley Consultants INC.



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REV.	BY	DATE	DESCRIPTION

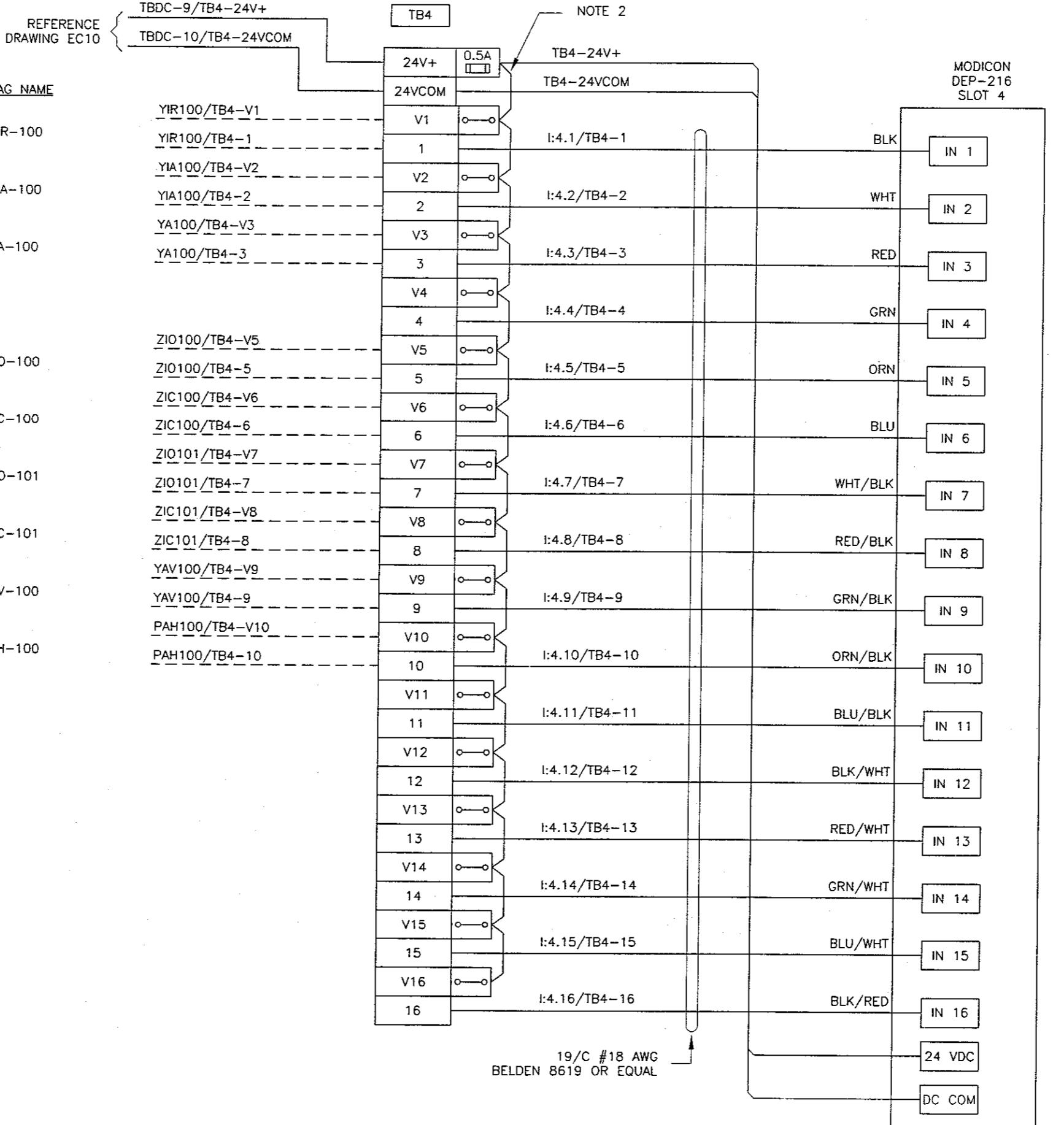
GOLDEN VALLEY RANCH WELL #1  
RHODES HOMES ARIZONA, LLC  
MOHAVE COUNTY, AZ**SLOT 3  
DISCRETE INPUT  
SCHEMATIC**

DRAWN BY: GAF	PROJECT NO. 1175.00.101
DESIGNED BY: GAF	SUBMITTAL DATE: MARCH 2006
CHECKED BY: EH	DRAWING NUMBER EC13 SHEET 13 OF 15

**NOTES:**

- 1 WIRE MODULES PER MANUFACTURER'S REQUIREMENTS.
2. BUS OR INSULATED COMB STYLE JUMPER

<u>DESCRIPTION</u>	<u>TAG NAME</u>
WELL SITE NO.1 WELL PUMP RUN STATUS	YIR-100
WELL SITE NO 1 WELL PUMP AUTO STATUS	YIA-100
WELL SITE NO 1 WELL PUMP FAULT ALARM	YA-100
SPARE	
WELL SITE NO.1 PUMP-TO-WASTE VALVE OPEN STATUS	ZIO-100
WELL SITE NO.1 PUMP-TO-WASTE VALVE CLOSED STATUS	ZIC-100
WELL SITE NO.1 RESERVOIR NO.1 FLOW VALVE OPEN STATUS	ZIO-101
WELL SITE NO.1 RESERVOIR NO.1 FLOW VALVE CLOSED STATUS	ZIC-101
WELL SITE NO.1 WELL PUMP VALVE INCOMPLETE SEQUENCE ALARM	YAV-100
WELL SITE NO.1 WELL PUMP HIGH PRESSURE ALARM	PAH-100
SPARE	



**DL Engineering & Controls INC.**

5820 S. Colton Avenue, Suite 200  
Phoenix, AZ 85012  
(602) 955-5336 fax  
[www.dlepc.com](http://www.dlepc.com)

**Stanley Consultants INC.**

3550 N. Central Ave., Ste. 1900 Phoenix, AZ 85012  
(602) 265-9193









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GOLDEN VALLEY RANCH WELL #1  
RHODES HOMES ARIZONA, LLC  
MOHAVE COUNTY, AZ

**SLOT 4 DISCRETE INPUT SCHEMATIC**

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